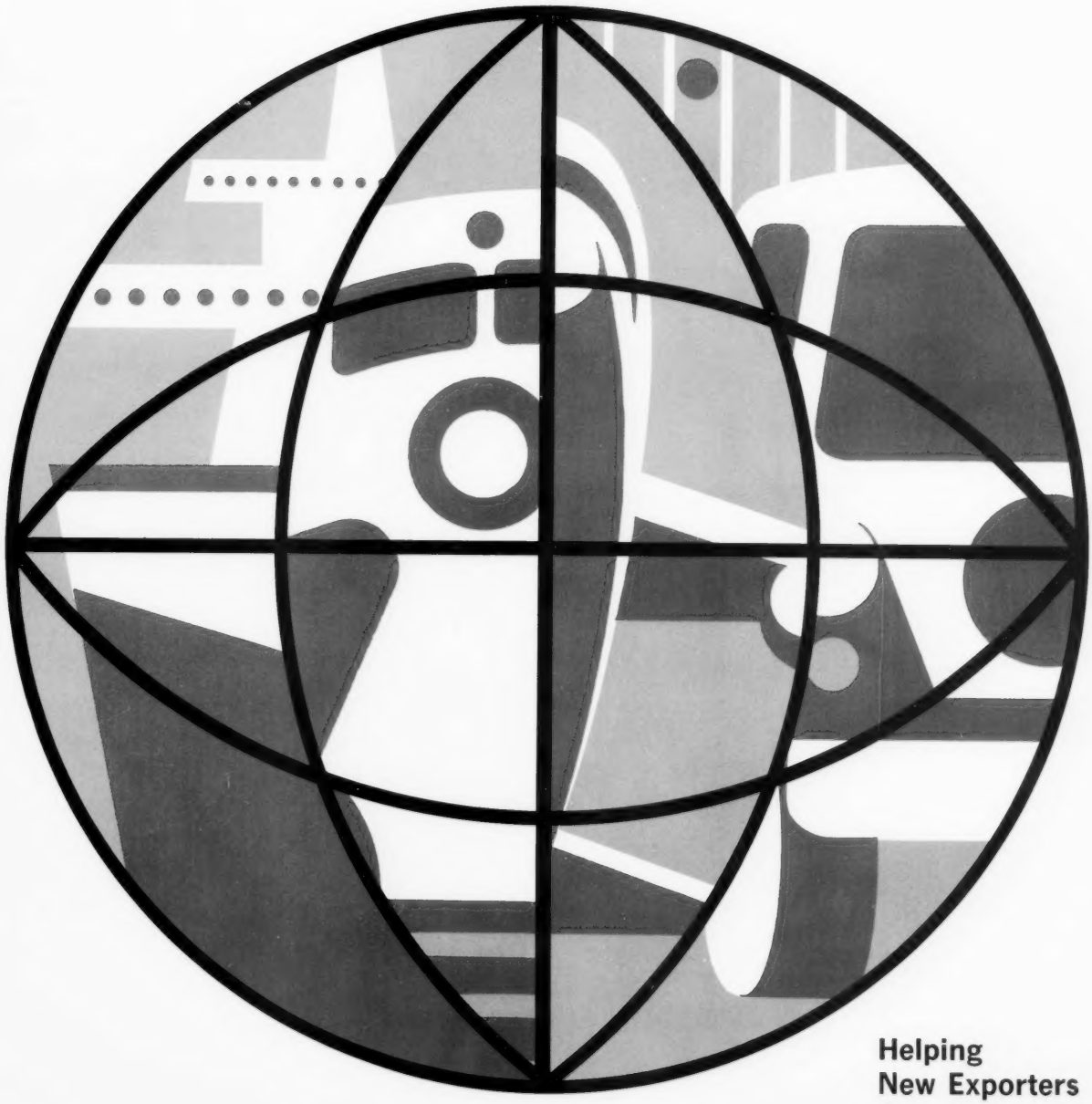
COMMERCE AMERICA

FORMERLY COMMERCE TODAY

U.S. Department of Commerce / November 22, 1976



Helping New Exporters Over Transport Hurdles

Newsmemo

Modern technology can bring major benefits to health care but also pose problems. Sophisticated equipment is helping doctors diagnose and treat patients more effectively and even cutting costs by eliminating some operations and tests. But over-buying and under-use of expensive items is pushing the rapid rise in health care costs. For example, computerized x-ray scanners that can provide images of body cross-sections range from $400,000 to $550,000 apiece. Reacting to high costs of under-utilized equipment, five states have publicly declared moratoriums on purchase of such scanners and other states are pursuing the same course without public notice.

Clean air costs for one U.S. firm: $600 million. That is what U.S. Steel estimates it will spend over a 10-year period. New air pollution control equipment at Clairton, Pa., represents $155 million of this total. The expenditure estimate is related to a proposed consent decree announced between the company and Pennsylvania state and local air pollution control authorities.

Electronic banking means that a full dossier on an individual's finances is instantly available to outsiders—or does it? American Bankers Assn. spokesman Kenneth Larkin says that the amount of personal information obtainable under the new electronic fund transfer system is not greater than under current check-type arrangements. Computer access to it will, of course, be faster. The ABA believes that competition can help safeguard privacy, contending that if alternative systems are available, banks will strive harder to protect their customers in order to retain their accounts.

Equipment used in electronic fund transfer is already valued at $5 billion. Of this, $1.5 billion is in terminal installations and $3.5 billion in supporting computers. By 1986, according to an Arthur D. Little study, the value of the terminals should quadruple and that of the computers should double. Growth of EFT systems depends, however, largely on state legislation to meet court rulings that EFT terminals are branch banks. Other obstacles are the high cost of terminals and the matter of consumer acceptance.

Trends in sales of imported passenger cars are being watched carefully this fall. A strong September showing by imports—18.5 percent of total U.S. retail sales—surprised many auto market analysts, who were expecting the usual decline in import sales during that month. Import sales for 1976 through September were 15.5 percent of the total U.S. market. Top year for imports was 1975, when they captured 18.4 percent.

Taking sides in the fluorocarbon ban controversy: go-slow advocates want better data, move-ahead proponents seek to push for substitutes. A National Academy of Sciences report lent support to those who see fluorocarbons as damaging the earth's ozone layer. But it also urged a delay in regulation while research in this field continues. Now the Food and Drug Administration has proposed a ban on use of fluorocarbon propellants for aerosol products. The Environmental Protection Agency backs the proposal, believing it will promote development of alternatives, not only as propellants, but as refrigerants and for other uses.

Nevada Says Go Metric. So said hundreds of lapel buttons distributed at this year's Nevada State Fair. And a metric scale from the state Department of Education showed young ladies that they really weighed 62—kilograms, that is. The metric education program is going forward in all parts of the country. Thirty-two states have some kind of activity authorized by their legislatures or state school authorities, and 23 have put up road signs using metric designations. Conversion to metric means, first of all, building public familiarity with meters, liters, grams and degrees Celsius.

Let's tell the world that the U.S. is designing new products that conserve energy. Companies with such products are being invited to get free worldwide publicity about them through a Commerce Department export promotion called the New Product Information Service. The service, which reaches thousands of industry and government customers abroad through newsletters of U.S. Embassies and Consulates, is planning a special energy efficiency edition. Deadline for applications is Dec. 30. Call 202-377-5783 for details.

COMMERCE AMERICA

FORMERLY COMMERCE TODAY

CONTENTS **Vol. I, No. 24, November 22, 1976**

4

Helping New Exporters Over Transport Hurdles

Commerce global transportation specialists in New York oversee movement of goods to 100 trade shows yearly, providing U.S. firms much needed assistance with their transport problems.

6

U.S. Merchant Marine: Right On Course

Government funding of about $490 million in 1976-77 will produce $1.5 billion worth of new ships with considerable impact on the economy and employment, a new report points out.

2 Economic Highlights

In recent months, wholesale industrial commodity prices have accelerated but the overall impact has been muted by declining prices of farm-related products. In the months ahead, some of the pressures on industrial prices may ease but the recent declines in farm prices are not expected to continue.

10 Energy Digest

11 Domestic Business Report

Smoke detector radiation hazard seen minimal—New tax act benefits fishermen—Seven Great Lakes firms join MARAD in ice navigation project—U.S. housing costs growing faster than occupants' incomes—Personal income breakdown covers more than 3,000 U.S. areas—Northeast Pennsylvania manufacturers get customs sanctuary—Study approves waiving of federal requirements on detecting weld flaws in Alaska pipeline—Researchers see silicones as possible substitute for PCBs, insulating oils—More than $1 trillion worth of property now subject to local taxes—Computer program helps architects design energy-efficient buildings—Calendar of business events.

21 International Commerce Report

U.S. trade expands as domestic recovery boosts import demand—Report on National Foreign Trade Convention—New tax act shrinks DISC export incentive—Official Trade Briefs—Reports on U.S. exhibitions in the United Kingdom, Czechoslovakia, Venezuela—Economic trends in Canada, Pakistan, Bangladesh, Thailand—Calendar for World Traders—New international business reports summarized—Licensing, sales, construction opportunities abroad—U.S. travel plans of foreign buyers.

COVER: American firms are moving their goods abroad by sea, air, truck and rail with the assistance of a team of professional global transportation specialists experienced in foreign marketing assistance. The story of how they operate begins on page 4.

U.S. DEPARTMENT OF COMMERCE

ELLIOT L. RICHARDSON
Secretary

EDWARD O. VETTER
Under Secretary

HORACE S. WEBB
Director of Communications

RICHARD BALENTINE
Editor

CLARENCE M. ZENS
Associate Editor, International Commerce

ARTHUR McDERMOTT
Associate Editor, Domestic Business

CHARLES MESSINA, JR.
Graphics Coordinator

Staff Writers:
Douglas F. Carroll, Felix Cotten, Margaret L. Hanson, Leslie Wilder.

Published biweekly by the U.S. Department of Commerce, Washington, D.C. Annual subscription rate $29.80 ($7.45 additional for foreign mailing, $5.75 additional for domestic air mailing). Single copy $1.15. Make checks or money orders payable to Superintendent of Documents and mail to Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402, or to any U.S. Department of Commerce District Office.

All subscription inquiries and address changes should be sent to the Superintendent of Documents, at the above address. This is the central distribution agency for U.S. Government publications.

Microfiche copy available at $2.25 per issue from National Technical Information Service, Springfield, Virginia 22151. Other inquiries should be sent to the U.S. Department of Commerce, 14th Street and Constitution Avenue, N.W., Washington, D.C. 20230.

Contents of this publication are not copyrighted unless indicated, and if not so indicated, the articles may be reproduced in part or in full without any prior consent. The Secretary of Commerce has determined that the publication of this periodical is necessary in the transaction of the public business required by law of this department. Use of funds for printing this periodical has been approved by the Director of the Office of Management and Budget through August 31, 1981.

ECONOMIC HIGHLIGHTS

Farm Sector Restrains Rise In Wholesale Prices

This column was prepared by John W. Kendrick, Commerce Chief Economist, in collaboration with staff economist H. Kemble Stokes.

John W. Kendrick

The advance in wholesale prices so far this year has been quite modest by the standards of the early 1970s. In recent months, however, industrial commodity price rises have accelerated, and the overall Wholesale Price Index has increased at a fairly reasonable pace only because of the offsetting declines in prices of farm-related products. In the months ahead, industrial prices may advance at a more moderate rate while recent declines in farm prices are not expected to continue.

During the first ten months of this year, wholesale prices increased by less than three-tenths of one percent per month. Price increases have varied considerably from month to month, with declines early in the year and more significant increases in recent months. Nevertheless, the average monthly change is far below the 1.6 percent average of 1974, and indeed still slightly below the average monthly change in 1975. In fact, in October of this year wholesale prices were only 3½ percent above year earlier levels, the smallest year-over-year increase since November 1971.

Despite this generally favorable perspective, however, the all commodities index of wholesale prices has increased more rapidly in recent months as an accelerating trend of industrial prices has been combined with sharp monthly fluctuations in prices of farm products, processed foods and feeds.

In the first three months of this year prices of farm-related commodities declined by about 1.4 percent per month, as prices of livestock, processed meats, poultry and fish, eggs, and dairy products declined sharply. These declines counterbalanced the modest increases in industrial commodities. Between April and June, livestock prices increased significantly and, aided by continuing increases in grain prices, raised the price index for farm products, processed foods and feeds by 1.4 percent per month. However, since June, prices have again declined by an average of 1.0 percent per month.

Prospects for agricultural prices may change significantly over the next few months, however. Cattle prices have virtually ceased declining and could begin to increase by early 1977 since feedlot placements are now rising more slowly. This reflects a sharp reversal of increasing placements during 1976. Hog prices have declined substantially and they probably will remain flat for at least the next few months since hog production has been particularly strong. Grain prices, after increasing sharply during the first half of 1976, are now declining as a result of good harvests for wheat and corn; prices could fall further, though at a considerably reduced rate.

While agricultural prices may remain quiescent in the near term, their ability to offset price increases on industrial commodities will become more limited.

Industrial prices, after rising by less than 0.3 percent per month during the first half of this year, have increased by over 0.8 percent per month since that time. However, in the months ahead price increases are more likely to moderate than to accelerate.

This impression is derived in part by the non-recurring nature of many of the recent price increases, including prices of fuel, rubber, metals, and transportation equipment, as well as the expectation of moderation in wood products.

Lumber and wood prices rose by more than 3 percent per month from June to October. Early in the year the lumber industry was unable to respond quickly to an upsurge in demand, but supply problems were largely overcome during the second quarter. Continued increases in demand for lumber and wood products rest upon significantly improved housing starts. However, further increases in starts are likely to be more restrained over the next 6 to 12 months.

Fuel prices have been heavily affected by partial decontrol of crude oil and significant adjustments to the prices of natural gas. Oil obtained from stripper wells, about 14 percent of domestic production, has recently been decontrolled and this had an important impact on the October Wholesale Price Index. While this price effect is largely completed, any OPEC price increase would cause further price increases.

The Federal Power Commission authorized an increase in the ceiling price for natural gas discovered since January 1, 1973. Another ruling allows a price increase to offset recent reductions in the depletion allowance, which would otherwise have resulted in a decline in the after-tax rate of return. Most of the impact of these rulings is in the past.

Price increases for rubber and plastics averaged 1.4 percent per month during the last three months in contrast to only slight rises earlier in the year. The recent large increases correspond almost precisely to the settlement of the strike in the rubber industry. Thus, price increases were not related to excess demand pressures and are not likely to be repeated.

Metal price increases, and in particular prices of steel products, affected both the June and August indexes. A more recent attempt to further increase steel prices failed in the face of market conditions, enhancing the near-term outlooks.

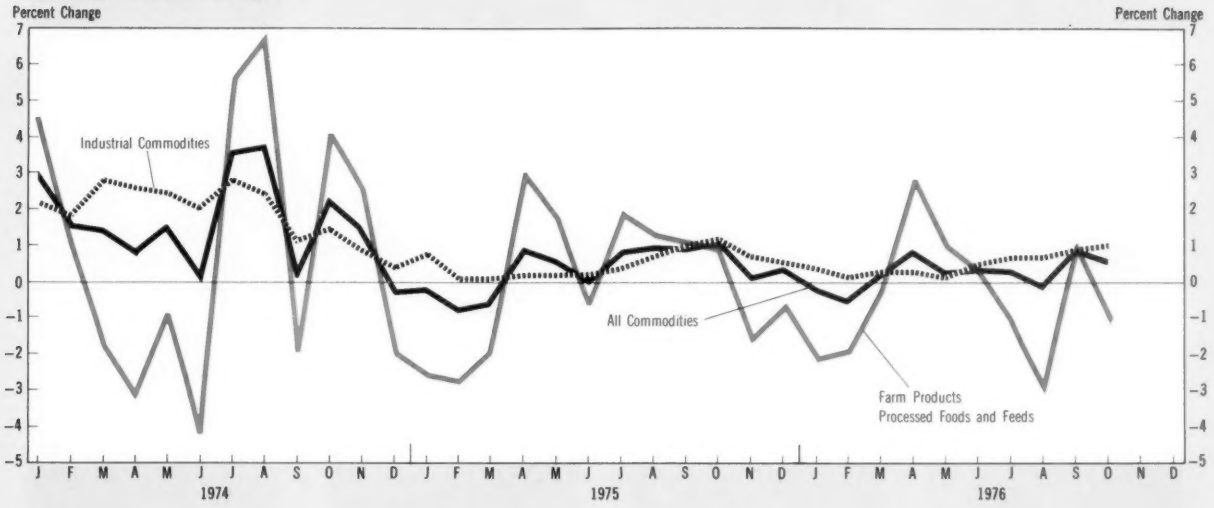
In both September and October machinery and equipment prices increased more rapidly than earlier in the year. Since markets for these products are not yet robust, it is likely that these price increases reflect the pass-through of the previous steel increases and are therefore of an inherently short-term nature.

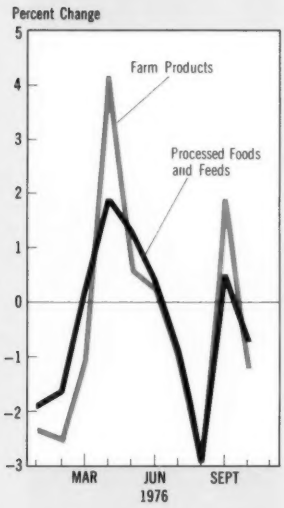
Prices of transportation equipment increased significantly in August, September, and October. In August the price increases reflected increases in prices for railroad equipment; in September for auto parts. The October increase, by far the largest, resulted from price increases on new 1977 model year automobiles. The publicly announced price increase was a little under 6 percent. After removing 1/6 of this increase for quality change, and adjusting for the removal of seasonal influences, passenger car prices increased by 2 percent. Further price increases are likely to be considerably more muted. Imported car prices for the new model year are not likely to affect the transportation equipment index significantly.

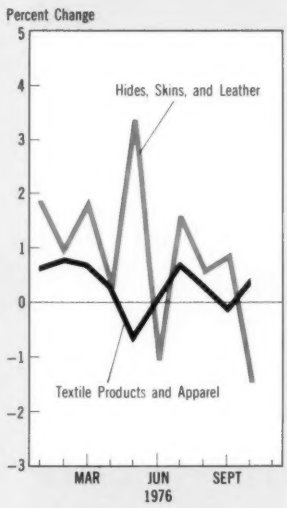
The behavior of wholesale prices has been restrained for this stage of an economic recovery. While agricultural prices are not expected to be the restraining factor that they have been during 1976, there is some promise of moderation in industrial prices if only because some of the larger and essentially one-time increases have been completed.

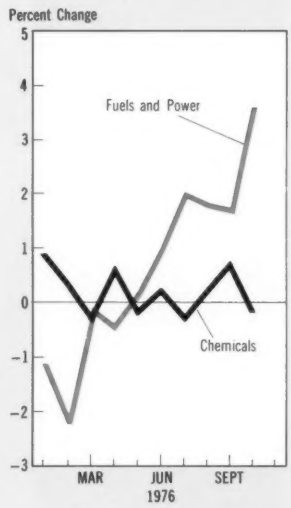
This page replaces Page 3 of the November 22, 1976, issue of *Commerce America* originally printed in error.

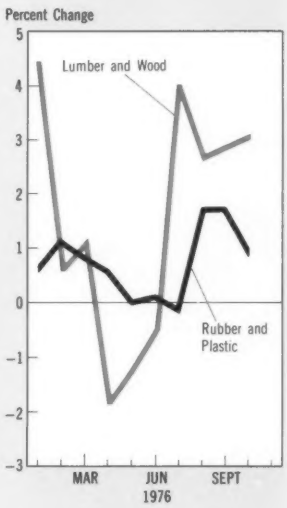
Wholesale Price Indexes
(Monthly Percent Change)

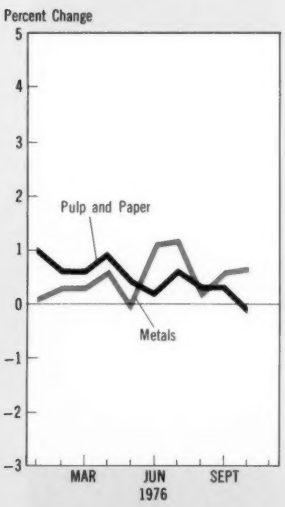

Percent Change
Percent Change
Industrial Commodities
All Commodities
Farm Products
Processed Foods and Feeds
J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D
1974
1975
1976

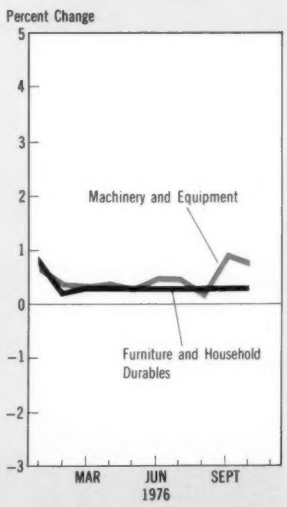


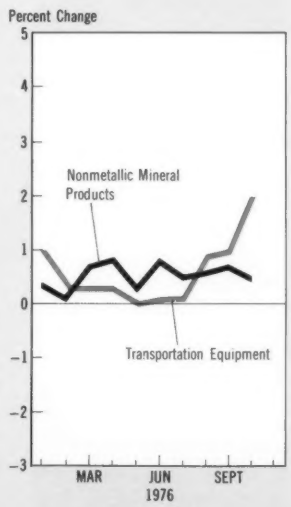


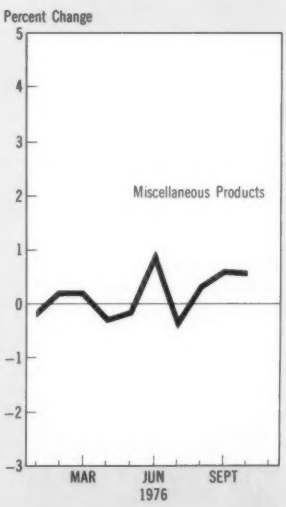












SOURCE: Bureau of Labor Statistics

Helping New Exporters Over Transport Hurdles

New exporters entering Commerce Department trade promotions abroad are looking primarily for experienced foreign marketing assistance. But even before the marketing process begins, they stand to receive important introductions from professionals in a related field—the Department's global transportation specialists.

These professionals, working out of a New York office, oversee the movement of goods by sea, air, truck and rail to 100 trade shows each year in places like Singapore, Sydney, Moscow, Milan, Mexico City, Tehran and Stockholm. Every shipment must meet a firm calendar deadline. Deadline is the apt word, for delays are not merely embarrassing or irksome, but probably fatal. When opening day arrives at each show the exhibitors' goods simply have to be in place. Necessarily, all kinds of delivery problems must be anticipated, met and overcome.

The U.S. company concerned with the shipping process—often watching its goods and equipment head outward from familiar American ground for the first time—is kept fully involved. It gets what amounts to a quick, concentrated course in worldwide transportation matters.

Solid information is the key to achievement on the ever-changing transportation scene. The New York exhibits transportation office is at the hub of a worldwide network in which telex and telephone messages flow in hourly, including these recent samples received from Commerce installations abroad:

"We are informed by our forwarders that [an air freight firm] has heavy backlog in Paris for Iran. Apparently only carrier to give rebates, so gets much business. Indications here are that local staff not very interested in detail or follow-through, and showing little control. Suggest you recommend to all exhibitors not to use them for shipments to Tehran."

"Ship all air cargo destined for Moscow direct to Duesseldorf or other West European city for trucking to Moscow. Overall costs including clearances would be more expensive by sending air freight shipments direct to Moscow airport."

"Shipping through Khorramshahr is impossible. Some shippers who would like business insist they can guarantee shipment through other southern ports, but our experience with guarantees leaves much to be desired. Situation is difficult and requires long, long lead time for assurance of delivery."

"Airport customs warehouse facilities exceptionally strained with situation not improving. Possibility of cases being lost or temporarily misplaced now on verge of becoming probability. Please advise all exhibitors that air shipment must repeat must be made at least 30 days prior to opening."

"On your query why does trucking from Le Havre to Paris, 130 miles, cost same as from De Gaulle airport to nearby Paris: Freight forwarder has a great deal of cargo coming from Le Havre. All freight is consolidated, in regular traffic, which reduces costs. When a shipment arrives at airport for an exhibition, a special truck is dispatched. There is no volume, as with shipments from Le Havre. Therefore it is relatively more expensive to bring a shipment from an airport to the Trade Center."

"Everything coming in on one airway bill is weighed. Everything going out is weighed . . . and if the weight going out is different from the weight coming in due to giveaways such as printed matter, it is held up even in those cases where customs duties were already paid on the giveaways."

In sharing these messages with exhibiting companies, the Commerce exhibits transportation specialists supply information that can have long-range value. The immediate application, of course, is to the staging of a particular exhibition. But tied to other details, it can help a U.S. firm build significant expertise into its shipping procedures and avoid costly mistakes, delays and diversions as it ventures further into exporting.

The Commerce shipping office in New York is under the direction of Sam Bevans, who has had extensive experience in receiving exhibition shipments abroad. He has served as an exhibition manager and the deputy director of a U.S. Trade Center. His staff of four shipping specialists handles about 3,000 sets of shipping instructions for U.S. firms each year.

Speaking of the impact of this staff, Bevans declared: "The names are Santorelli, Bertolotti, Rubinstein and DeBenedetto, household words to hundreds of U.S. companies that ship equipment destined for exhibitions sponsored by the U.S. Department of Commerce at major international trade fairs or the Department's trade centers. In shipping to an exhibition, a little more is required than the service provided by a freight forwarder, and this personalized help is given by these specialists."

From the time initial contact is made with the exhibitor, whether he is on the East or West Coast, to the time the exhibitor's material is delivered to the appropriate pier or airport in the United States, one of the four transportation specialists maintains complete control of the material, assuring that it is marked and consigned properly in accordance with Commerce's instructions and delivered to the appropriate carrier prior to a deadline date determined by the specialist.

The exhibitor is guided through each step of the shipping process: packing, documentation requirements, marking, forwarding, delivery, adherence to special requirements imposed by the foreign country for importing the materials, etc. Although all shipments are arranged by one of Commerce's official freight forwarders located on the East Coast, Gulf Coast, or West Coast, it is one of these Commerce transportation specialists who guides the exhibitor in moving his materials.

Each transportation specialist is an expert on how to ship to a particular region. At his disposal is information received from the 12 permanent trade center installations and their overseas freight forwarders, from foreign posts, and locally from foreign consulates in the New York area, Chambers of Commerce, other government units such as Maritime Administration, U.S. despatch agencies, freight forwarders, direct contacts with top officials of both steamship companies and airlines, and other groups such as traffic associations and clubs. He is also kept aware of political problems and possible port strikes overseas which could affect shipping, and congested ports to avoid. He counsels routing of shipments so the exhibitor can obtain lowest costs for inland transportation overseas.

TRANSPORT SPECIALISTS AT WORK—Officials of the Commerce Department and the Port Authority of New York and New Jersey check an export shipment in New York harbor with a shipping industry official.

In trade exhibitions, meeting a shipment deadline is a must.

A company must budget accurately to avoid unexpected charges which could spiral once the materials arrive overseas and are trucked to the exhibition. Taxes, customs duties, special tariffs, transport costs from an overseas port of entry to final destination, and freight forwarder charges can total up to more than the value of one's equipment or more than the company paid for participation in an exhibition. The transportation specialist has at his disposal sufficient information to advise the exhibitor, prior to shipment, what these charges will be. Trucking in Eastern Europe after arrival at an overseas port, for example, could cost twice as much as the actual ocean charges. This information can be relayed to the company prior to shipment. Certain governments in foreign countries could impose extremely high taxes, duties, and other charges by a freight forwarder could be burdensome to some U.S. companies if they are not made aware of this information.

Bevans commented that smoothly functioning transportation arrangements make for good relationships between exhibitors and the exhibition officials: "When the exhibitor arrives in the foreign country to man his exhibit booth, the materials are already unpacked and installed in accordance with his instructions or those of the fair designer. When the exhibition is over, he supervises the packing and advises the fair manager of disposition details. If his equipment is not sold and he wants it returned to the States, the Commerce Department arranges for return shipment of the goods. Through the Exhibits Transportation office, the equipment is cleared through customs and returned to the factory."

Bevans also noted that the expertise of his office is available to any U.S. company exhibiting overseas in a Commerce-sponsored exhibition: "Since we are a service unit of the Department of Commerce, any U.S. company seeking advice on shipping matters in connection with such exhibitions can call any of the specialists on 212-264-8990, or reach them at Room 3719, 26 Federal Plaza, New York 10007." ☆

U.S. MERCHANT MARINE

Subsidies for ship construction are one of the American taxpayer's best long-term investments, producing an estimated $3 in private spending for every dollar of government funding. For the years 1976 and 1977, for example, this represents some $1.5 billion worth of new ships for a government expenditure of about $490 million. By the time the money has worked its way through the economy, the impact upon the GNP could be expected to reach over $10 billion. It is estimated that more than $1 billion, or twice the amount of the subsidy, would be paid in taxes. In addition, the resultant impact on employment would amount to about 400,000 jobs.

It hardly seems necessary to justify such a boon to the economy, but there is general misunderstanding about the need for and results of subsidies in the maritime industry.

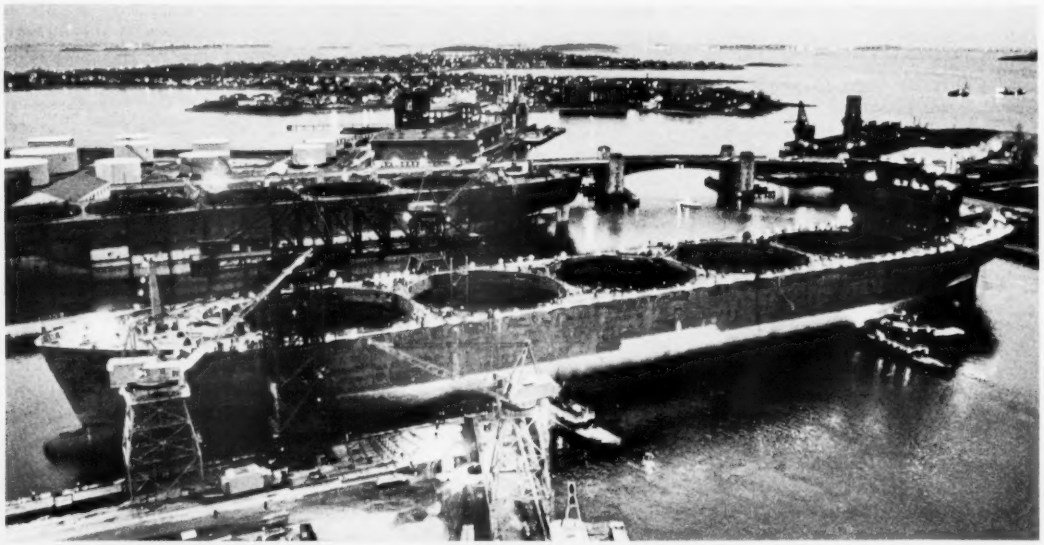
Although the United States generates the largest share of the world's seaborne trade in both value and tonnage, its flag ships for years have carried only a small percentage of its cargoes.

Following the passage of the Merchant Marine Act of 1970, the most recent government measure to assist the maritime industry, U.S.-flag ships began increasing their share of U.S. foreign trade at competitive world prices. By the end of 1974, cargoes carried by U.S.-flag ships had increased to 41 million tons, a gain of 68 percent over the 24.4 million tons in 1971. Total tonnage carried by foreign-flag ships increased only 36 percent.

Cargo tonnages carried by U.S.-flag ships in 1974 were the largest, by far, for any year since 1957. Prior to that year, U.S.-flag ships were engaged in carrying large quantities of aid and relief cargoes in the aftermath of World War II, the Korean conflict, the Middle East War and other political and economic disruptions.

Why was governmental action needed to spark business for U.S.-flag ships? Why were U.S. importers and exporters not automatically turning to U.S.-flag ships? The reasons are complex:

- The cost of operating U.S.-flag ships is greater than foreign ones, due to higher wages, insurance, maintenance and repair costs;
- The cost of building vessels at U.S. shipyards is greater than foreign costs, due to higher U.S. wages and materials costs. Additionally, there are more than a dozen government statutes or regulations to which the shipbuilder must conform. These higher standards were designed to make safer ships, with less danger for crews and cargoes, and to minimize pollution of the marine environment;
- Unstable labor-management relations in the U.S. maritime industry had led to disruptive strikes;
- Shipbuilding was declining. As cargoes dwindled, so did the market for new ships;



NEW SERIES—The LNG-1, one of the first two liquefied natural gas carriers launched in the United States, is the core of what is expected to become a sizable fleet.

RIGHT ON COURSE

• Finally, as U.S.-flag ships decreased, so did the availability of same for use in the event of a national emergency.

It was against this background that the Merchant Marine Act of 1970 was passed.

Government assistance in support of the U.S. maritime industries is nothing new—President George Washington was the first to formulate it. Twenty-five other presidents supported it in one way or another. Congress gave it sanction.

One of the first acts of the first Congress of the United States dealt with the promotion of industry, trade and shipping. Understandably, government and public attention to the status of the U.S. merchant marine were greater during periods of international tension; they lessened when peace was prevalent. Wars were always the motivation for a strong American merchant marine and shipbuilding industry, while periods of peace inhibited their growth.

Between 1789 and 1828, more than 50 additional statutes and commercial treaties were approved to protect and promote American shipping. Since that time there have been numerous other laws to improve the U.S. merchant marine.

The most recent of these, the Merchant Marine Act of 1970, amended the Merchant Marine Act of 1936. The 1936 act had laid the groundwork for a modern merchant marine, but was not altogether successful in encouraging construction of a balanced fleet of cargo liners, bulk carriers and tankers in adequate numbers to compete for a fair share, much less a substantial share, of the nation's enormous tonnage of oceangoing foreign trade. About 60 percent of all the freighters, bulk carriers and tankers in the privately-owned U.S. merchant marine in 1969 was, on average, more than 20 years old. In that year, U.S.-flag ships carried the smallest share of the country's total export and import trade in this century . . . 4.5 percent.

Although the 1970 act contained numerous provisions, it gave primary considerations to ways and means for:

• Developing the U.S. shipbuilding industry by establishing a goal for the construction of 300 merchant ships over a 10-year period (this was later altered);

• Encouraging procedures to reduce U.S. shipbuilding prices;

• Deferring taxes on earnings of U.S. shipping companies in foreign, Great Lakes and noncontiguous trades if placed in a capital construction fund to replace, rebuild or add new ships;

• Establishing government construction support goals with a decreasing ceiling on the differential between U.S. and foreign building costs.

• Operating and construction subsidies on certain bulk dry and liquid carrier operations and the method of computing subsidies.

With the passage of the act, an aggressive series of programs was initiated under the direction of the Maritime Administration, a Department of Commerce agency. Maritime set about designing a shipbuilding program that would produce innovative, competitive ships for all segments of the merchant marine; and developing a highly motivated marketing program that would produce cargoes on an increasing basis in order to sustain the fleet.

In September 1971, the National Maritime Council (NMC) was established, consisting of chief executives of the shipbuilding and shipping industries, the maritime unions and the Maritime Administration. Its purpose is to develop a strong, competitive U.S.-flag merchant marine which will afford American exporters and importers the best service possible to meet their requirements. To this end, highly experienced traffic executives of export and import companies also serve as advisors to the NMC on matters affecting shippers.

The Council provides a forum where the highly individualistic shipping and shipbuilding companies and labor unions can speak with one another face-to-face about the problems of the U.S. merchant marine and how to overcome them. Unlike most others, the maritime industry has so many diverse objectives that at times each segment has sought its own ends with little regard to the needs of the customer, the American shipper.

The Council has grown from an 11-man organizational committee to the present 34-member elected Board of Governors. Membership on the board consists of the chief executive officers of all principal U.S.-flag shipping lines, the major maritime seagoing and shoreside labor unions, the

. . . highly experienced traffic executives of export and import companies also serve as advisors to the NMC . . .

This article is excerpted from the book *The United States Merchant Marine—A National Asset* by Irwin M. Heine, published by the National Martime Council. For further information, contact the Council at P.O. Box 7345, Washington, D.C. 20044.

The NMC strives to win shipper preference for U.S.-flag service when it is equal or superior to foreign-flag service.

largest shipbuilding companies and the Maritime Administration.

Despite the constantly improving sailing schedules offered by U.S.-flag lines and the expanded marketing services rendered by the Maritime Administration, past uncertainties regarding shipping services have left a residue of caution among some American shippers. To overcome this hesitancy and to assist shippers in other transportation matters, the NMC is developing programs based upon fulfilling the shippers' transportation needs.

The National Maritime Council does not ask shippers to patronize a U.S.-flag vessel if its service is inferior or if its sailing schedules are inadequate for the shipper's needs. Nor does it ask the shipper to ship American if it means he will have to pay a higher freight rate than is legitimately offered by foreign lines. However, it does strive to win shipper preference for U.S.-flag service when it is equal or superior to foreign-flag service.

Among the NMC programs are four regional groups, which hold workshops and discussions around the country to bring together importers and exporters with representatives of shipping and shipbuilding companies, labor and government; task force units that make direct contact with individual key exporters and importers; and shipper advisors, corporate traffic officials acquainted with overseas shipping problems who provide the NMC with guidance on distribution and transportation matters.

The NMC has achieved an unusual degree of unity and cooperation among all segments of the U.S. maritime industry. It cites as the best manifestation of this the improved relationship between management and labor, and the government's relationship with those two segments and with the shipbuilding industry. All have combined to resolve the numerous problems that have plagued the industry for years.

The U.S. shipbuilding industry is principally comprised of some 150 private shipyards of various sizes located in the Atlantic, Gulf, Pacific and Great Lakes regions. There are, however, about 25 major shipbuilding and repair yards capable of building oceangoing merchant and naval vessels. The 151,000 personnel employed by the commercial shipbuilding industry throughout the country make a contribution to the economy far in excess of their numbers. In many instances, shipyards create jobs for people, including minorities, who would otherwise remain unemployed.

Although total U.S. foreign trade amounts to less than 15 percent of the country's GNP, it is absolutely vital to the United States in maintaining its industrial and defense posture in the world. In 1973, an estimated 47,600 jobs were created or supported in the United States for every billion dollars of exports.

U.S.-flag ships offer scheduled shipping services on 49 trade routes to and from the United States which cover virtually every area of the world. To the extent that U.S.-flag ships operate on these trade routes, they increase international shipping competition, which benefits U.S. shippers. In short, they act as a stabilizing factor on freight rates and in insuring continuity of shipping services.

The struggle for foreign markets is becoming more intense, especially with the growing industrialization of many of the less-developed countries. And as this trend grows, many governments are granting increasing support to their maritime industries as an integral part of their international economic and political policies. Under today's conditions, the American merchant marine provides a safeguard against any foreign shipping discrimination that would hamper U.S. shippers' efforts to compete in world trade.

The term "national interest" has security, economic and political connotations as well as a philosophical implication that is concerned with the public welfare and safety or patriotism. Practically all of the major maritime nations stress the importance of their countries' welfare and safety by urging the use of national-flag ships in overseas trade to the greatest extent possible.

It would be hazardous to the national interest for the United States to place complete reliance upon the merchant fleets of other countries, including those under effective U.S. control, in discharging their international economic commitments. The latter are not considered an effective substitute for U.S.-flag shipping in accommodating defense needs.

In regard to the need for subsidies, many countries offer a wide variety of social, economic and political assistance to their merchant marines. A recent Maritime Administration study notes that there are at least 11 types of direct and indirect subsidies and five social, economic and political types of assistance that nations grant in support of their maritime industries. The study also points out that, practically without exception, maritime nations regardless of the size of their fleets offer some form of direct or indirect assistance to their shipping and/or shipbuilding industries.

The United States has two forms of direct financial aid: Construction Differential Subsidy, which is the difference in costs between having a ship built in a foreign shipyard and having the same ship constructed in a U.S. shipyard, and Operating Differential Subsidy, which seeks to equalize the disparity in operating costs between American ships and their foreign competitors with respect to wages, insurance, and maintenance and repairs not compensated by insurance.

Prior to the 1970 act, Construction Differential Subsidy ranged as high as 55 percent. The gap between U.S. and foreign shipbuilding costs in the past few years, however, is narrowing. Instead of running as high as four-to-one a few years ago, wage costs on certain orders have dropped to about two-to-one.

Revaluations of foreign currencies, changing patterns of inflation in foreign countries, increased wage demands by foreign shipyard workers, and

An operating subsidy does not guarantee the recipient company a profit.

SPREADING THE WORD—Left, winner of the 1976 National Maritime Poster Contest. Right, National Maritime Council shipper advisors meet with U.S.-flag carrier executives in San Francisco for a discussion on improving and expanding U.S.-flag shipping services.

changes in shipyard worker productivity relationships are important factors in narrowing the gap between U.S. and foreign shipbuilding costs.

Recently, tanker orders have been placed with a construction subsidy of 33 percent; liquefied natural gas carriers are being built with a subsidy of 16.5 percent. At no time in the past 40 years has the Construction Differential Subsidy reached so low a level. As the Commission on American shipbuilding has noted, where the U.S. shipbuilding industry is given the opportunity to build ships in series and has an ongoing order book to insure stability, ". . . it is fully capable of equaling the production efficiency in any foreign shipbuilding industry for the construction of similar ships."

At the beginning of 1975, American shipyards as a group had the largest order book for merchant ships, naval vessels, and specialized craft in any peacetime period. The following ships were under construction or on order: 63 naval vessels, 95 merchant ships, and 38 specialized craft (rigs, platforms, drill ships and other oil exploration craft), with a total estimated value of $11.9 billion.

Not all U.S. privately-owned merchant ships receive Operating Differential Subsidies. Of the 176 companies which own U.S.-flag ships, 13 operating companies receive the subsidy for all or part of their ships. In order to receive the subsidies the companies must assume rigid long-term contract obligations, including ship replacement programs that will amount to hundreds of millions of dollars. They must operate under strict operating limitations as to trade routes and services, and number of scheduled sailings, and place part of their earnings in capital reserves for vessel replacement.

An operating subsidy does not guarantee the recipient company a profit. Rather, its purpose is to permit the American operator to achieve parity in wages, maintenance and repair, protection and indemnity, and hull and machinery insurance with competing foreign-flag ships operating in the same trade or service. Prior to the 1970 Act the ships eligible for operating subsidy were extremely limited.

If the U.S. shipbuilding industry is to contribute to the national economic well-being and security, it requires a large continuing flow of orders for all types of vessels. Aging, less productive merchant and special-type ships and craft must be replaced on an orderly basis so they can compete effectively in U.S. foreign trade.

The new five-year forecast of budget outlays holds promise of alleviating the uncertainty of funding for Maritime Administration and Navy shipping and shipbuilding expenditures. Such forecasts could enable the maritime industries to engage in advance planning and maintain necessary levels of manpower.

The Merchant Marine Act of 1970 gave recognition to the correlation that must exist between trade expansion and incentives to cargo carriage by U.S.-flag ships. It enunciated a national policy that adequacy of shipping and shipbuilding serves the national interest. It gave momentum to the construction of a variety of ships that heretofore were the province of foreign shipbuilders.

Where there had been no shipyard capacity for liquefied natural gas carriers, U.S. shipyards now have orders for 16 of 125-130,000 cubic meters, the largest sizes on order in any of the world's shipyards, at subsidy rates as low as 16.5 percent. Four others of the same size receive government mortgage insurance. Very large and ultra large crude carrier tankers (those over 200,000 and 300,000 deadweight tons, respectively), for which shipyard capacity was not available three years ago, are on order and under construction.

As a result, capital investment has increased enormously to expand the capacity and capability of U.S. shipyards to undertake the construction of not only all types of merchant ships but also naval vessels and the rigs used in off-shore exploration and production of oil and gas.

By strengthening its maritime industry, the United States is assuring its exporters and importers of consistent, economical transport for their goods, and is guaranteeing that an up-to-date merchant fleet is available to serve the country in the event of international crisis.

Energy Digest

IMPORTERS, PLEASE NOTE . . . The Federal Energy Administration has issued a new summary of its import regulations entitled, "A Compliance Guide for Importers of Petroleum." This booklet explains in layman's language the regulation affecting importers of petroleum, procedures to be followed in its importation, and the assistance available from FEA. This is the third in a series of five FEA guides explaining the application of its pricing regulations. Two more will be published shortly on the pricing of crude oil and natural gas liquid processing. Earlier guides covered retail pricing of propane and retail gasoline pricing. Copies are available from FEA regional offices.

SPEEDING UP COMMERCIALIZATION . . . Federal researchers hope to speed up commercialization of the Solvent Refined Coal (SRC) liquefaction process by combining the experimental data derived from two pilot plants now in operation in Alabama and Washington. The SRC process involves combining a slurry of coal and process-derived solvent with hydrogen added under pressure. No catalyst is added to bring about liquefaction. The reactor effluent is filtered to remove ash and unreacted coal, and results in a solid, environmentally acceptable fuel. The Energy Research and Development Administration (ERDA) has awarded two contracts to Southern Company Services of Birmingham, Alabama, to provide additional data for design of commercial SRC plants at a date earlier than originally planned. "The SRC process is our most advanced liquefaction process with respect to scale and operability," said ERDA's Dr. Philip C. White. "It provides an attractive route for conversion of high-sulfur coal to an environmentally acceptable substitute for coal as a boiler fuel."

EVERYTHING GETS USED . . . U.S. industry may obtain a large part of its future aluminum requirements from coal wastes—with the help of a new process under study at ERDA's Ames, Iowa, laboratory. The Ames process, which uses chlorine gas at high temperatures to extract aluminum from coal wastes, could reduce U.S. dependence on foreign bauxite ore for its aluminum needs. With increasing nationwide energy demand, use of coal for power production may double by 1980. This would increase the amount of fly ash produced to 80 million tons per year. Currently only 20 percent of this material is being used, most of it by the construction industry. The Ames scientists expect to develop processes that would convert all of the fly ash into materials of commercial value, including iron pellets, aluminum chloride and sulfur. Complete recovery of the aluminum contained in fly ash would provide this country with an amount equal to that now being extracted from imported bauxite. Furthermore, the Ames process uses only 70 percent as much electrical energy as the recovery of aluminum from bauxite requires.

BUILDING CONTROL BONANZA . . . High fuel oil costs, aggravated by increasing demand and diminishing domestic supply, have created a bonanza for the building control system industry, according to Frost & Sullivan, a New York-based market research organization. Forecasting the industry's anticipated growth for the next ten years, F & S predicts overall volume rising to $775-million annually by 1985, from $200-million in 1974. In its new 120-page "Building Controls Systems" study, F & S also reports on all aspects of power management and building automation systems in terms of product utility, energy-management benefits, market growth and profitability.

BRAKING ENERGY USAGE . . . The nation's 30,000 automobile dealers will be the focus of an energy cost reduction program jointly sponsored by FEA and the National Automobile Dealers Assn. (NADA). Auto dealers use substantial amounts of energy, especially in their repair facilities and for lighting. The study, one of seven being undertaken of different types of small businesses, will begin with detailed on-site energy audits and anlyses of selected automobile dealers. Results of these studies will be introduced at NADA's national convention in January and incorporated into energy cost reduction guides to be disseminated to its membership. The Association also plans to hold energy cost reduction worshops for its membership throughout the country.

COAL OPTION REQUIRED . . . Coal-burning capability must be incorporated in the construction of 48 electric utility powerplants in 22 states under terms of orders announced by the Federal Energy Administration. The plants will have an estimated generating capacity of nearly 29,000 megawatts while using 84 million tons of coal per year. This amounts to 300 million barrels of oil. All 48 plants involved in the orders had planned to build with coal-burning capability, but the orders will preclude future back-sliding to oil.

Smoke Detector Danger From Radiation: Minimal

EXPOSURE FROM IONIZATION DETECTORS IS FAR BELOW LEVEL A PERSON RECEIVES FROM THE SUN EACH DAY

If you've been postponing the purchase of an ionization smoke detector because of the possible radiation danger, you can start shopping!

The National Fire Prevention & Control Administration and the National Bureau of Standards, both agencies of the U.S. Department of Commerce, support the Nuclear Regulatory Commission's determination that radiation from ionization smoke detectors represents a negligible exposure level.

According to the Nuclear Regulatory Commission (NRC), radiation exposure from the ionization detector is far below the normal radiation a person receives each day from the sun. The NRC cites a number of additional facts as evidence of the safety of smoke detectors. Among them are:

- Stand within ten inches of an ionization detector for eight hours a day, every day of the year, would only result in an annual radiation exposure of less than 0.5 millirems. For comparison purposes, normal background radiation exposure from natural sources is approximately 100 times greater per year.
- A person flying round-trip across the United States receives about five millirems because of the increased radiation at high altitudes. This is ten times greater than the exposure received by holding the detector next to the body eight hours a day for an entire year.

Consumer's Union, an independent testing laboratory, checked the surface of each assembled ionization smoke detector unit in a test sample with a Geiger counter and could detect nothing beyond ordinary background radiation.

The Nuclear Regulatory Commission also conducted studies of the potential dispersal of radioactive material from a fire in a warehouse where hundreds of detectors were stored. The studies show that the potential dispersal in the fire situation would be negligible and would present no radiation hazard to firefighters or cleanup crews.

The NRC held that the regulatory requirements dealing with the design, use and disposal of smoke detectors containing small quantities of radioactive material are adequate for public health and safety. Further, before a license is granted for production and sale of a detector containing a radioactive source, NRC makes a detailed safety evaluation of both the detector design and the manufacturing process.

While the risk of radiation from a smoke detector is negligible, the risks of failing to purchase a detector, or of removing one already installed, are very real. Of the 12,000 persons who die from smoke and fire each year, and of the 300,000 persons who are seriously injured, the great majority fall victims at home at night. Smoke overcomes them before they can awaken and escape. Where people are not protected by smoke detectors, the likelihood of fire-deaths and injuries is increased.

According to Howard D. Tipton, Administrator of the National Fire Prevention and Control Administration, "The home smoke detector is the most significant single technological weapon our nation has to reduce fire deaths and destruction. But smoke detectors are only one part of a home fire safety plan. The detector must be installed and maintained properly, but even more important, families must plan and practice a home escape plan. If awakened at night by the smoke detector's alarm, people may be groggy and confused. But if they have planned and practiced an escape plan, they may be more able to leave the home quickly and safely."

New Tax Act Contains Benefits For Fishermen

The Tax Reform Act of 1976 contains several favorable changes affecting the tax status of U.S. fishermen. Commerce's National Oceanic and Atmospheric Administration reports that the Act increased the benefits available to users of the Capital Construction Fund (CCF) tax-deferral program and increases the number of fishermen eligible to use the program.

The CCF program, administered by NOAA's National Marine Fisheries Service, enables fishermen to construct, reconstruct, or, in some cases, acquire fishing vessels with before-tax dollars by allowing them to defer payment of federal taxes on income from the operation of their vessels.

These federal taxes, when deferred and used to help pay for a qualified vessel project, amount to an interest-free loan from the government.

Previously, fishermen were not allowed to claim investment tax credit on that portion of a vessel's cost paid for under the CCF program. The Act provides, however, that a 5 percent investment tax credit may not be claimed even on the portion of a vessel's cost paid for under the CCF program (the regular 10 percent investment tax credit is still available for the remainder of a vessel's cost). This change applies to vessels placed in service during taxable years after Dec. 31, 1975.

The Act also extended CCF eligibility to all fishing vessels two net tons or more. The previous minimum had been five tons.

Under the Act, operators of fishing boats with fewer than ten crewmen no longer have to withhold taxes from crew pay, or make Social Security contributions, if the pay consists only of a share of the catch. Until now, crewmen on fishing boats were treated as regular employees rather than as self-employed, regardless of how they were paid.

Another section of the Act clarifies the status of certain fishermen's organizations which may now qualify to receive the lower postal rates enjoyed by tax-exempt agricultural organizations.

For further information, call or write the nearest NMFS Regional Financial Assistance Division Office.

U.S. HOUSING COSTS CONTINUE TO OUTSTRIP OCCUPANTS' INCOME RISE

The costs of housing have been rising much faster than people's ability to pay them during the first half of this decade.

Continuing the upward spiral of previous years, the median value of owner-occupied, single-family homes rose by 59 percent, from $17,100 to $27,200, between 1970 and October 1974, according to the Annual Housing Survey for 1974 conducted by Commerce's Bureau of the Census. Median income for homeowners rose by only 32 percent during this same period, from $9,700 to $12,800.

Median monthly gross rent (including utilities) increased from $108 to $143 (32 percent) from 1970 to 1974, while the median income of renters went up from $6,300 to $7,700 annually (22 percent), according to the report.

The report also showed that the value of owner-occupied homes in 1974 was about twice the income of their owners. This ratio varied considerably, however, according to income level.

For example, the value of homes in the low income group (owners with incomes of less than $5,000) was four times or more than their annual income; many of these owners were elderly. In the high income group (owners with annual income of $25,000 or more, however, the value of homes was less than 1.5 times median income.

Renters generally paid about 22 percent of their annual income for gross rent. Households with incomes under $5,000 spent 35 percent or more of their incomes on rent in 1974. Households with incomes of more than $25,000 spent less than 10 percent of their incomes on rent.

For owner-occupied homes valued at less than $10,000 (about 8 percent of the total owner units), the report shows that about 73 percent were built prior to 1950. One-third of these homes have air-conditioning, while 13 percent lacked complete plumbing facilities. For units valued at $35,000 or more (about 31 percent of the total), 23 percent were built before 1950, 63 percent had air-conditioning, and less than 1 percent lacked complete plumbing. The median income of households in lower-valued homes was $5,500 in 1974, compared to $20,300 in homes valued at $35,000 or more.

For housing units renting for less than $70 a month (about 11 percent of the total renter units), 67 percent were built prior to 1950, 17 percent had air-conditioning, and 26 percent lacked complete plumbing facilities. However, of the units renting for $200 a month or more (about 19 percent of the total rental units), 29 percent were built prior to 1950, 68 percent had air-conditioning, and less than 1 percent lacked complete plumbing. The median income of low rent households was less than $3,000 in 1974 compared to $13,400 for units renting for $200 or more.

In addition to presenting detailed cross-classification of housing characteristics by income, value, and gross rent for the nation as a whole, the report has similar data on blacks and the Spanish-origin population.

Copies of the report, Part C, *Financial Characteristics of the Housing Inventory for the United States and Regions: 1974*, Series H-150-74, are available for $3.75 each from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402, or from Commerce District Offices in major cities.

Meeting Seeks Views On Coastal Management

A public meeting is scheduled for November 29 in Seattle to allow the public to comment on the country's first and only approved coastal management program. Officials of the Office of Coastal Zone Management at Commerce's National Oceanic and Atmospheric Administration and from the Washington State Department of Ecology will attend the all-day meeting for the specific purpose of listening to public comments.

Washington's program is a comprehensive statement of policies, goals, and standards for guiding public and private uses of the lands and waters in the coastal zone. In June, NOAA awarded Washington $2 million in program implementation funds, which the state supplemented with $1 million in matching funds.

Persons wishing to speak at the meeting should contact D. Rodney Mack, Department of Ecology, Olympia, Wash. 98504 (206-753-6879). Information about the Washington program is available from this address.

Book Aids Firms Considering Transporting Own Goods

Transportation plays such a major role in company operations that it is a continuing duty of management to examine its costs with an eye toward reducing them. A new publication, *Managing Your Private Trucking Operation*, by Thomas R. Henke, will aid a company in deciding whether to operate its own fleet.

Henke's book covers such subjects as simulation studies, drivers, safety regulations, lease versus buy, equipment, maintenance, dispatching, communications, taxes, legal considerations and many others.

The paperbound book, priced at $7.00, may be ordered from The Traffic Service Corp., 815 Washington Bldg., Washington, D.C. 20005.

MINORITY FIRMS GET $900,000 BOOST ON ROAD TO SELF-SUFFICIENCY

More than $900,000 in federal funds will help a Philadelphia organization implement a new technique in encouraging minority firms—the establishment of local cooperatives aimed at providing capital and training for minority business.

The funds, from Commerce's Office of Minority Business Enterprise, will be used by Opportunities Industrialization Centers of America (OIC) to form Community Investment Cooperatives (CICs) in eight cities. These units will serve as vehicles through which community members can invest in profit-making companies which provide "seed money" for local enterprises.

Each CIC will also provide training in business management and ownership for community residents.

Another element of the plan calls for establishing a local branch of Progress Venture Capital Corp., an OIC-sponsored minority enterprise small business investment company (MESBIC), in each of the eight cities. They will provide a vehicle for reinvestment of the cooperatives' funds.

The CICs will be patterned after the highly successful job development program started in the early 1960's by OIC founder and chairman, the Rev. Leon H. Sullivan. It involves an incremental investment process designed especially for low-income persons. Through 1975 this method produced some $1.8 million for investment in community projects and job producing businesses in the North Philadelphia area.

Using funds provided by the one-year grant from Commerce, OIC is applying this method to start similar units in Jacksonville, Fla.; Rocky Mount, N.C.; Augusta, Ga.; Springfield, Ohio; Oklahoma City, Okla.; Saginaw, Mich.; Trenton, N.J.; and Santa Ana, Calif.

First-year goals for each CIC city have been set at 500 local investors in the cooperative, 50 persons trained at economic development training centers, and $150,000 of venture capital funds for the local branch of Progress Venture Capital Corp.

In announcing the OMBE grant, Commerce Secretary Elliot L. Richardson said, "The self-help theme which is the foundation of the OIC program parallels the goal that guides Commerce's efforts to stimulate economic development—to help communities help themselves."

Alex Armendaris, director of the Office of Minority Business Enterprise, pointed out that his agency is in a position to work closely with the new CICs through its regional offices and some 270 local business development organizations it supports around the country .

SEVEN PRIVATE FIRMS JOIN GREAT LAKES ICE NAVIGATION PLAN

Seven Great Lakes shipping companies have joined the Maritime Administration (MarAd) in funding a $230,000 research project to open the northern waterways to year-round shipping.

The project, through a series of ship-model tank tests and shipboard experiments, seeks to develop an improved bow design which will enable bulk-carrying vessels to transit the heavy ice that halts shipping operations on the lakes each winter.

According to Robert J. Blackwell, Assistant Secretary of Commerce for Maritime Affairs, who heads MarAd, the contract is both significant and exceptional because "it marks the first time that so many Great Lakes companies have joined in a research effort of this kind."

MarAd will fund 78 percent of the total cost while the remainder will be borne jointly by a consortium headed by Pickands Mather and Co., of Cleveland, and includes the following firms:

Litton Great Lakes Corp., Erie, Pa.; Great Lakes Fleet, United States Steel Corp., Duluth, Minn.; American Steamship Co., Buffalo, N.Y.; and Hanna Mining Co., Cleveland-Cliffs Steamship Co., and Oglebay Norton Co., all of Cleveland.

The technical effort will be conducted by Arctec, Inc., of Columbia, Md., as a subcontractor to Pickands Mather. Arctec's role is to determine how the bows of Great Lakes bulk carriers can be improved to increase their ice-transiting capabilities without decreasing their cargo-carrying capacity. This will involve two primary tasks:

- Model tests—a series of resistance and maneuvering tests with a 20-foot (1/50th scale) model of a modern, 1,000-foot Great Lakes bulk carrier. The model will be designed and built by Arctec in modular form so that it can be fitted and tested interchangeably with three different bow forms.
- Shipboard tests—a series of full-scale ice-impact-load tests, using strain gauges, to measure forces on the hull of the large lake tug-barge *Presque Isle* under winter ice conditions. Arctec will develop a mathematical (predictor) model that will enable ship designers to predict impact forces that would be encountered with differing bow forms.

The ice-transiting bow research project is part of a winter navigation demonstration program authorized by Congress in 1970 aimed at extending the navigation season on the entire Great Lakes-St. Lawrence Seaway system.

The Maritime Administration has committed $2.5 million in R&D funds to this program over the past six years. Previous MarAd research contracts have aimed at the development of a laser navigation system to facilitate winter operations on the lakes; evaluation of various hull designs; testing of air-bubble systems, which control icing conditions in selected lake waters; and development of a VHF-FM telecommunications system which permits Great Lakes vessels to dial directly into commercial phone lines.

The ice-navigation program is directed by the Winter Navigation Board, which includes labor and industry representatives from a private interests advisory group; representatives from nine federal agencies, and observers from three Canadian organizations.

NATO Auto Makers To Exchange Data On Energy-Saving Progress

Automobile manufacturers and government officials from nine nations will meet in Washington April 18-22 to exchange the latest information on the development of energy-efficient, low-pollutant vehicles.

Sponsored by the North Atlantic Treaty Organization's Committee on Challenges of Modern Society, the meeting will be hosted by the U.S. Energy Research and Development Administration.

Technical sessions will be devoted to: Stirling, Diesel, Rankine, and gas turbine engines; electric and hybrid vehicles; power train components; stratified charge and spark ignition improvements; automotive emissions (including exhaust gas and noise); vehicle improvements (weight, aerodynamics and safety); and the role of the automobile in future transportation.

This will be the fourth International Symposium on Automotive Propulsion Systems/Low Pollution Power Systems Development. The focus of the meetings was originally on developing lower pollutant vehicles among the auto-producing industries of NATO members, but growing concern with the energy problem has led to more and more concentration on energy-saving vehicles and development of alternate fuels.

Participation is open to all sectors concerned with transportation research—government, private organizations and academic institutions.

For additional information, contact Ms. Nancy Myers, Div. of Transportation Energy Conservation, Office of Conservation, ERDA, Washington, D.C. 20545.

Four Reports Give Details On Ocean Merchant Ships

The Maritime Administration has published four statistical reports on oceangoing vessels in both the U.S. and world merchant fleets.

Merchant Fleets of the World, updated annually, summarizes MarAd's extensive collection of data on oceangoing steam and motor ships of 1,000 gross tons and over in the merchant fleets of all maritime nations as of Dec. 31, 1975. This edition (GPO Stock No. 003-007-0073-1) may be ordered from the Superintendent of Documents, GPO, Washington, D.C. 20402, at $1.25 per copy.

Bulk Carriers in the World Fleet (GPO Stock No. 003-007-0074-0); $2.15/copy provides detailed information on general, special and multipurpose bulk carriers (ore/bulk/oil, e.g.) of 67 countries as of Dec. 31. 1975. The report notes that the number of ships in this category has nearly doubled and their total deadweight tonnage has increased fourfold in the preceding ten years.

Containerized Cargo Statistics, published every year, summarizes containerized cargo statistics for each of the Maritime Administration-designated U.S. foreign trade routes for calendar year 1974 and contains other information about the transportation of cargo in containers in the waterborne foreign commerce of the United States. A limited number of copies are available upon request from the Office of Public Affairs, Maritime Administration, U.S. Department of Commerce, Washington, D.C. 20230.

The Vessel Inventory Report, a semi-annual publication, lists U.S.-flag dry cargo and tanker information as of June 30, 1976. It is also available from Maritime's Public Affairs Office.

ERDA To Review Procurement Policies With Industry

The Energy Research and Development Administration and the oil/gas industry will discuss ERDA procurement policies and contract procedures at a Dec. 2-3 seminar in Houston.

The Gulf Universities Research Consortium will host the meeting at the Jetoro Boulevard Quality Inn.

The seminar will provide a forum for both ERDA and industry to become better acquainted with the other's specific needs. Maximum participation by industry representatives will be encouraged.

ERDA representatives will explain current policy and anticipated trends and answer questions.

Seminar sessions will be open to the general public. Additional details may be obtained from Dr. E. Alan Lohse, Gulf Universities Research Consortium, (713/6687-0992), or Richard A. Justis, ERDA's Division of Procurement (202/376-9065).

Personal Income Breakdown Covers Over 3,000 U.S. Areas

Personal income data for 3,618 metropolitan areas, nonmetropolitan area counties, economic areas, and states have been prepared by Commerce's Bureau of Economic Analysis.

Titled *Local Area Personal Income, 1969-74*, the four volumes show: total and per capita personal income by place of residence, personal income by type of payment, and labor and proprietors' income by major industry and place of work.

Personal income in 1974 increased 9.8 percent in metropolitan areas and 7.3 percent for all nonmetropolitan counties combined. Metropolitan areas accounted for 78 percent of the total.

On a per capita basis, personal income for metropolitan areas was $5,813, 107 percent of the U.S. average. For nonmetropolitan counties, per capita personal income averaged $4,444, 82 percent of the U.S. average.

Among metropolitan areas, the fastest-growing ten in 1974 total personal income were: Anchorage, Alaska — 26 percent; Richland-Kennewick, Wash.—21 percent; Bakersfield, Calif.—20 percent; Odessa, Texas—17 percent; Houston, Texas—17 percent; Fresno, Calif.—16 percent; Baton Rouge, La. — 16 percent; Fort Myers, Fla.—15 percent; Fayetteville, N.C.—15 percent; Beaumont-Port-Arthur-Orange, Tex.—15 percent.

On a per capita basis, the highest 10 SMSAs were (with percentage above national average in parenthesis): Bridgeport-Stamford-Norwalk-Danbury Conn., $7,781, (43); Anchorage, Alaska, $7,159, (31); Washington, D.C.-Md.-Va., $7,102, (30); Nassau-Suffolk, N.Y., $7,084, (30); San Francisco-Oakland, Calif., $7,030, (29); Newark, N.J., $6,861, (26); Chicago, Ill., $6,780, (24); New York, N.Y., N.J., $6,668, (22); West Palm Beach-Boca Raton, Fla., $6,622, (21), and Reno, Nev., $6,620, (21).

Economic profiles, tracing changes over a six-year period, can be drawn up for all 3,618 areas with the help of the four-volume set, as shown below.

For example, Charles County, Maryland, had become a metropolitan commuter county by 1974 in contrast to its rural nature in 1969. Its population grew by 12,000 in the six-year period and its per capita income increased from 81 to 93 percent of the national average. The amount of residence adjustment—which reflects commuter earnings—rose by more than 300 percent.

In Louisa County, Virginia, the construction of a nuclear power plant shows up in the jump in earnings from construction in 1974. Construction accounted for 52 percent of local earnings in 1974 compared with 11 percent in 1969. Manufacturing, trade, and government accounted for 66 percent of earnings in 1969 and only 32 percent in 1974. Due to the construction, more workers now commute into the county than out. This is reflected in the negative 1974 residence adjustment amount.

In Stearns County, Minnesota, manufacturing jumped from $44 million in 1969 to $81 million in 1974. Population gained about 12 percent.

Walsh County, North Dakota, benefited from rising farm income which accounted for two-thirds of total earnings in 1974. While population remained constant between 1969 and 1974, per capita income went from 80 to 143 percent of the national average.

Send order for *Local Area Personal Income, 1969-74*, to the National Technical Information Service, 5285 Port Royal Road, Springfield, Virginia 22161. Make check payable to NTIS. Be sure to mention accession numbers of the volumes desired.

Vol. I includes methodology and classification of SMSAs and BEA economic areas. Shows data for all states, BEA economic areas, and SMSAs. Accession No. PB 254055. $10.

Vol. II shows data for counties and SMSAs in the following states: Connecticut, Delaware, District of Columbia, Illinois, Indiana, Iowa, Maine, Maryland, Massachusetts, Michigan, Minnesota, Missouri, New Hampshire, New Jersey, New York, Ohio, Pennsylvania, Rhode Island, Vermont, and Wisconsin. Accession No. PB 254056. $13.75.

Vol. III covers Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee, Virginia, and West Virginia. Accession No. PB 254057. $16.25.

Vol. IV covers Alaska, Arizona, California, Colorado, Hawaii, Idaho, Kansas, Montana, Nebraska, Nevada, New Mexico, North Dakota, Oklahoma, South Dakota, Texas, Utah, Washington, and Wyoming. Accession No. PB 254058. $16.25.

All are also available in microfiche for $2.25 apiece.

Canadians To Get More U.S. Tourism Information

A free service providing travel information about U.S. tourist attractions has been expanded to two additional Canadian cities, according to Commerce's United States Travel Service. InfoRoad USA, which was initiated in the metropolitan Toronto area in 1975, will open shortly in Montreal and Vancouver.

The phone-in, write-in, walk-in service is aimed at Canadian motorists. Some 9.9 million Canadians visited the United States in 1975, and three-quarters of these traveled by automobile.

Vancouver's InfoRoad will be a cooperative project of USTS, the Pacific Northwest Regional Commission (representing the states of Oregon, Washington and Idaho) and the San Francisco Convention and Visitors Bureau. It will be operated under contract by the British Columbia Automobile Association, affiliated with the Canadian Automobile Association.

InfoRoad in Montreal will be a cooperative effort by USTS and the states of Maine, New York and Florida through a contract with the Montreal Touring Club, also a CAA affiliate.

The U.S. areas participating in the projects are doing so because of predominant Canadian travel patterns from the metropolitan areas being served to these regions.

InfoRoad USA's services will be within reach of more than 1.3 million Canadians residing in the metropolitan Vancouver area and nearly 3 million Montreal area residents, in addition to the 2 million Canadians already being served in Toronto.

Maritime Helps Builders Of Two Large Containerships

Commerce's Maritime Administration has awarded an $86.4 million contract to Maine's Bath Iron Works Corp., to construct two large containerships for American Export Lines.

Maritime will pay $21.4 million or 49.64 percent of the cost of each vessel under the federally assisted ship-construction program.

The contract will provide approximately 2,000 man-years of employment for the Bath workforce and an equal amount of employment in the marine supply industry which will furnish the machinery, equipment and materials used in the ships' construction.

Each vessel will be 610 feet long and accommodate 1,070 containers. They will have crews of 37 and a service speed of 21 knots. Deliveries are scheduled for July 1979 and May 1980.

American Export Lines will place the ships in regular service between the Atlantic Coast ports of the United States and the Mediterranean.

The contract brings to 64 the number of vessels ordered from American shipyards under the Merchant Marine Act of 1970. These ships, valued at $3.2 billion, will have a cargo capacity equivalent to 45 percent of the active U.S. fleet.

Northeast Pennsylvania Gets Customs 'Sanctuary' To Keep Jobs In U.S.

U.S. manufacturers have another "no-man's land," their twentieth, where they can make or alter goods moving in international trade while American Customs officials look the other way.

Commerce's Foreign Trade Zones Board recently approved the Eastern Distribution Center, Inc.'s, request to establish a foreign-trade zone in the Wilkes-Barre/Scranton customs port of entry.

A foreign-trade zone is an area under U.S. Customs supervision to which foreign merchandise may be brought without the immediate requirement of a formal Customs entry. Generally, the goods may be exhibited, stored, assembled, or used in manufacture within the zone. Duties need not be paid unless and until the goods or their end products enter U.S. Customs territory from the zone. Domestic goods moved into a zone for export are considered exported, for purposes of excise tax rebates and Customs drawback procedures, upon entering the zone.

The advantage of such zones is that they allow firms which have customs costs to contend with to carry on operations in the United States rather than overseas. This results in the greater utilization of domestic labor and facilities.

The zone will be located within the Eastern Distribution Center industrial park in Pittston Township, Luzerne County, Pennsylvania. It will cover 42 acres within the 265-acre industrial park adjacent to the Wilkes-Barre/Scranton International Airport.

Part of overall effort

Initial construction will include a 50,000 square foot public warehouse, and additional facilities will be built to meet the needs of individual tenants. The Zone, which will serve the special Customs needs of the international business community, is part of the area's efforts to attract industrial and distribution activity to which Commerce's Economic Development Administration has also made significant contributions. Trade name of Eastern Distribution Center, the zone grantee and operator, is International Trade Center of Pennsylvania.

Foreign-trade zone grants are issued under the Foreign-Trade Zones Act of 1934 which empowers the Board—consisting of the Secretary of Commerce, as Chairman, and the Secretaries of the Treasury and Army—to authorize qualified public and private corporations to establish zones in or near U.S. ports of entry.

Wilkes-Barre/Scranton joins New York City, New Orleans, San Francisco, Seattle, Mayaguez (Puerto Rico), Toledo, Honolulu, Bay City (Michigan), McAllen (Texas), Kensas City (Missouri), Kansas City (Kansas), Little Rock, Sault Ste. Marie (Michigan), San Jose (California), Omaha, Portsmouth (Virginia), Charleston (S. Carolina), Chicago and Buffalo in establishing such a facility. San Francisco and Honolulu have special-purpose subzones connected with their zones.

Two States Join Voluntary Fishery Inspection Program

Cooperative agreements to inspect fish and fishery products in Tennessee and Arkansas were signed recently by representatives of the states and the National Marine Fisheries Service of the National Oceanic and Atmospheric Administration (NOAA).

This program, a voluntary, fee-for-service arrangement, assists the fish industry in improving and maintaining the quality and safety of its product through inspection and standardization procedures usually carried out by federal inspections.

The agreements permit state food inspectors to be trained and cross-licensed by the Fisheries Service, an arm of the Commerce Department, so that they can inspect fishery plants and products on behalf of the Fisheries Service in their states. Cross-licensing makes inspection services more readily available to the trade and more inspected products available to consumers.

"During our inspections, special attention is given to wholesomeness, proper species identification, and quality in either fish or processed fish products," says Tom Billy, Seafood Quality and Inspection Division Chief.

"We also concern ourselves about problems of excess breading and short weight products to assure the consumer that what he purchases contains what the label indicates."

Inspection of fish products over the last two years has encouraged better plant sanitation as well as improved processing and quality control methods.

"More research is needed, however," Billy explains, "to fully understand the effects of fluctuating temperatures during transit and storage, from the time it leaves the processing plant until the time it is removed from the consumer's refrigerator to be eaten.

"The impact of these fluctuations on the physical and chemical properties of seafood and breading mixtures is another area needing further investigation."

Other states are expected to sign similar cooperative agreements with the result that more products inspected by Commerce Department procedures will be available to consumers.

Vanpooling Programs Yielding Energy Benefits Across Country

Vanpooling is paying big energy dividends to firms and their employees across the country, and the Federal Energy Administration is trying to popularize the concept.

FEA has launched five test demonstrations of vanpooling, a company-sponsored transportation program that provides low-cost and convenient commuting for employees, who travel to and from work in 12-passenger vans driven by fellow employees. FEA has calculated that if 5 percent of the U.S. work force commuted in vanpools, it would save more than 100,000 barrels of oil per day.

The FEA program is designed to interest companies in acquiring the vans and setting up a procedure to get vehicle routes established. One of the employees drives the van and gets his transportation free. The other riders pay a fare covering all operating and capital costs.

The benefits of vanpooling and the means to establish it have been outlined to companies in the Chicago suburbs; Nassau and Suffolk counties in New York; Hartford, New Haven and Bridgeport, Connecticut; Santa Clara and San Mateo counties in California; and New Orleans, Louisiana. Each of the establishments contacted has more than 500 employees and is located in an area not well served by mass transit.

Where specific interest is expressed, FEA will provide technical help to companies setting up a vanpooling program.

Both employers and employees already participating in vanpooling have realized benefits. Benefits to employers include reduced need for parking spaces, a lower rate of tardiness and absenteeism, better employee relations, and access to more potential employees. Employees save on gasoline costs and wear on personal vehicles, receive door-to-door service, and have a guaranteed seat.

Each van can save up to 3,200 gallons of gasoline per year, while cutting down on air pollution and traffic congestion. On the average, a full van takes the place of seven cars.

Vanpooling has been initiated by companies throughout the U.S. out of concern over the energy situation, parking problems, and other company objectives. Companies already using the technique include the 3M Company, General Mills, Hoffman-LaRoch, Prudential, Polaroid, and Continental Oil.

3M's Commute-A-Van, which received an FEA Excellence Award earlier this year, began as an experimental project in April, 1973, with six 12-passenger vans. Three years later, 77 vans carry more than 800 employees to and from work daily at the 3M Center in St. Paul.

Study Approves Waiving Federal Rules For Detecting Alaska Pipeline Weld Flaws

Commerce's National Bureau of Standards has endorsed the methods used by the Alyeska Pipeline Service Company to determine the dimensions of weld defects in the trans-Alaska pipeline system, and the influence of those defects on the performance of the pipeline.

NBS investigators concluded that fracture mechanics analysis, a method that forms the basis of a petition by Alyeska to waive federal requirements for certain defective welds in the pipeline, is a suitable methodology to assess performance of the welds. The study also concluded that the specific fracture mechanics analyses carried out by Alyeska are reasonable, with a few minor exceptions.

The study was requested by the Department of Transportation in response to Alyeska's request for a waiver of federal requirements. The Bureau was not asked to make a judgment on the acceptability of the welds, but rather to assess the methods that are used to predict performance to aid DOT in making its judgment on the Alyeska petition. Alyeska claims that the defects in the welds are borderline variances that do not jeopardize the integrity of the welds nor the safety of the pipeline.

The NBS study noted that the defect size measurement methods used in all the fracture mechanics analysis models that were evaluated are subject to errors, the magnitude of which cannot be precisely estimated.

The Bureau concluded that in general the Alyeska analyses were reasonable except for certain small defects.

A copy of the report, *Consideration of Fracture Mechanics Analysis and Defect Dimension Measurement Assessment for the Trans-Alaska Oil Pipeline Girth Welds*, can be obtained from the Materials Transportation Bureau, U.S. Department of Transportation, Washington, D.C. 20590.

Companies Urged To Apply For Anti-Pollution Awards

Companies that have made outstanding achievements in pollution control are eligible for a new joint government-industry awards program, the National Environmental Industry Awards. The program is sponsored by the President's Council on Environmental Quality and the Environmental Industry Council.

The awards will honor individual companies that have installed pollution control technology and systems. In addition to a national award for overall excellence, there will be special awards in the areas of air, water and wastewater, noise, solid waste and resource recovery. The selections will be made by an independent panel of judges that includes economists, businessmen, engineers and other experts.

Entries may be submitted until December 31. Award application forms are available from the Environmental Industry Council, Suite 210, 1825 K St., NW., Washington, D.C. 20006 (telephone 202-331-7706).

'FAR OUT' IS THE WORD FOR THIS ENERGY SCHEME

It begins to look like we won't have to wait until the 25th Century to usher in the age of Buck Rogers and Flash Gordon. By as soon as the year 2100 the United States could be getting its energy from "colonies" far out in space, the Federal Energy Office says.

The colonies, built from moondust and placed in orbit around the Earth, would offer convenient low-gravity workshops for building giant solar-power stations which would orbit the Earth and beam down energy through microwaves.

This plan was presented recently by a group of very serious, feet-on-the-ground Princeton University physicists.

"We think it can solve the energy crisis permanently, with cheap solar energy, and with no by-products," says Eric Hannah, a researcher on the project. In short, the Energy Millenium may be just around the corner.

The cylindrical colonies would have soil covered valleys, supporting houses, forests and streams, divided by large glass windows to admit sunlight. Each colony would be powered by solar energy collected through parabolic mirrors in its end cap.

Chemicals would produce an Earth-like atmosphere inside the cylinder, and eventually the colony would develop its own weather—complete with clouds and rain. Crops would be grown in the moondust soil, enriched with nutrients to shorten the plant growing season from months to weeks. Harvesting would be year-round.

Planners could design landscapes to match those of many places on Earth, making it easier for new residents to adapt to life on the colonies.

The National Aeronautics and Space Administration (NASA) first funded the program in 1974, but Princeton's Gerard K. O'Neil has been seriously studying the idea since 1969. He believes Earth's population would level off as space emigration increased.

Pharmaceutical manufacturing and mining are other exports the colonies could provide to Mother Earth. Purifying drugs is less expensive in space because of zero gravity of electric fields. Asteroids, rich in high-grade iron and nickel, could be collected in space and sent to Earth. One asteroid might provide enough steel to satisfy Earth for ten years.

Census Studies U.S. Voter Turnout In '76 Election

An extensive study of voter participation in the recent elections will determine the number of eligible voters, the number of registered voters, and the number of persons who actually voted.

Being undertaken by Commerce's Bureau of the Census, the study is authorized by the 1965 Voting Rights Act, which directs Census to conduct a survey in every state and certain political subdivisions.

The Census Bureau began the study immediately after the elections. The study involves complete censuses in 28 counties and independent cities and sample surveys in 65 jurisdictions.

After the censuses and surveys are completed, the compiled data will be presented to Congress as statistical tables. As in all censuses, no identifying information can be released about any individual and only sworn Census employees will seek personal information.

The questionnaire being used is shorter than that used in nationwide censuses. Each household member will be asked his name, sex, relationship to household head, race, date of birth, marital status, and national origin. In addition, those 18 years or older will be asked questions about their U.S. citizenship, whether or not they voted, and if they did not vote, whether they were registered to vote.

U.S. Overseas Reinsurance At Record Levels In 1975

U.S. insurance companies received more than $690 million in net premiums from reinsurance sold abroad in 1975, the Commerce Department has reported. This is the largest amount in the 26 years that such transactions have been reported.

Losses paid abroad on reinsurance totaled $480.2 million, leaving net U.S. receipts of $210.4 million for reinsurance of risks undertaken abroad.

Meanwhile, U.S. insurance companies paid out in net premiums more than $830 million to foreign reinsurers in 1975, likewise the largest amount ever reported.

Recovery of losses on this reinsurance totaled $558.2 million, leaving net U.S. payments of $262.3 million for reinsurance of U.S. risks accepted abroad.

The resulting effect for all current reinsurance transactions for 1975 was a net outflow of $51.9 million to foreign reinsurers in 1975.

Because it does not take account of profits remitted to the U.S. by U.S. insurance companies doing business abroad, this net outflow does not constitute the total effect of the international activities of the U.S. insurance industry on the balance of payments.

Researchers See Silicones As Possible Substitute For PCBs, Insulating Oils

American researchers have narrowed down their search for a product that can prevent a possible short-circuit in the supply of electricity to U.S. industry.

The Energy Research and Development Administration (ERDA) is funding a search to find replacements for polychlorinated biphenyls (PCBs) and certain petroleum-based mineral oils used in equipment critical to delivering electricity to residential and business consumers.

PCBs are being phased out of production because they are carcinogenic, and supplies of the mineral oils are dwindling. Both materials are used as insulating fluids in power transformers and other electrical equipment.

Transformers reduce electric energy from high to low voltage and are crucial in getting electricity from power plants to homes and businesses.

Because of their excellent fire resistance, PCBs have been used in transformers inside buildings, on trains, and in other places where non-flammability is a critical requirement. First introduced in the 1930s, PCBs have been used in paints, inks, adhesives and other products as well as transformers and capacitors. PCB-filled capacitors presently are used in television sets and fluorescent lights.

In recent years, however, PCBs have been found in streams, wildlife and humans and have come under sharp criticism because of potential toxicity and persistence in the environment. In late September, Congress passed the Toxic Substances Control Act which includes the phaseout of PCB production, importation and use over a 2-½ year period.

One more decade

Mineral oils have been used since the 1890s as insulating fluids in electrical equipment where non-flammability is not critical. However, it is estimated that the domestic wells which pump the particular crude oil presently used to produce these fluids may be depleted in about a decade.

Currently much of ERDA's research effort in replacing both of these items is focused on silicones, a family of colorless synthetic liquid polymers.

The General Electric Company's Pittsfield, Mass., laboratories recently began a study of silicone fluids under ERDA contract. From a group of about 40 silicone fluids, the GE research team will seek four to six types with the best potential for use in power and distribution transformers.

The study will include determining the basic characteristics of the silicones, their flammability, heat transfer capability, electrical strength, compatability with the environment, and other factors. Eventually, the work is expected to lead to development and design of several prototype transformers for detailed evaluation.

Preliminary findings indicate that silicones are much more fire-resistant than mineral oils and have the potential of reducing the size of future power transformers.

Silicones generally are considered to be non-toxic and have good electrical properties, but at present are relatively expensive.

Firms With Disaster Plans Sought For Starring Roles

Does your firm have a disaster plan? Does it have special emergency facilities which can be filmed? If the answer to both of these questions is yes, the American Society for Industrial Security is interested in making your company famous.

ASIS recently was awarded a Defense Department contract to produce a motion picture on industrial disaster preparedness.

The 26-30 minute film will portray the need for industrial and business organizations to develop, update and maintain industrial preparedness programs which can preserve company resources and operational capabilities in the event of a natural or man-made disaster.

Sites for filming are being surveyed, and ASIS welcomes any suggestions of companies which have instituted disaster plans.

The film will emphasize the basic elements of disaster preparedness, including: the survey, the emergency plan, protection of vital records, continuity of management, emergency operating capability and mutual aid plans.

Brochure, too

The project will also include preparation of a brochure incorporating key points in the film, and giving reference information on the essential need for disaster planning.

ASIS—whose membership is composed of professional security managers—is the largest organized group, nationally or internationally, in the security profession. Its members are those individuals primarily responsible for the development of systems and measures that prevent and eliminate unlawful acts against information, persons and property of the private and governmental organizations they serve. Members represent industry, government, business, public institutions including hospitals and schools, banks, public utilities, transportation and other industrial and commercial fields.

Pamphlets Help Building Owners 'Look Before They Leap' On Solar Energy

Business decision-makers and homeowners who are considering installing solar heating and hot water equipment, but who are not sure if the savings are worth the investment, can find some answers in four pamphlets recently published by the Energy Research and Development Administration.

Solar Energy for Space Heating and Hot Water (document SE-101, provides some of the cost and savings figures that consumers and builders need to decide whether or not to use solar space heating and water heating equipment. Charts, graphs, and drawings help the reader decide if solar equipment would be economical for a home or building in his particular climate zone.

Knowing probable purchase price and installation costs together with projected savings, can help a homeowner estimate how long it would take the solar equipment to pay for itself, and whether or not he wishes to make the investment.

For example, the owner of a 1,500-square-foot structure in Minneapolis can cover about 70 percent of heating and hot water needs with an investment of between $7,500 and $22,500 in solar energy equipment. The resultant annual savings would be on the order of $1,000 on the electric bill or $440 on oil, according to the pamphlet.

The same equipment could supply about 85 percent of the heating and hot water needs of a similar building in Phoenix, at an installed cost of $2,000-$6,000 worth of solar equipment. The estimated annual savings in this case would amount to more than $500 in electric costs or $195 in oil.

For the uninitiated, basic background information can be found in *Solar Energy*, a booklet written for ERDA by William Eaton. It tells how and why solar energy works, and briefly describes the major applications of solar energy, such as heating, cooling, and conversion to electricity. The booklet includes pictures, diagrams, and a short bibliography.

I've Got A Question About Using Solar Energy answers the eleven most frequently asked questions, such as: "What sort of financial help can I get for installing a solar system? Where can I find listings of solar equipment manufacturers? How do I go about selecting solar equipment? How can I learn how to build it myself?" This pocket-sized pamphlet also tells the reader how and where to obtain more detailed information on the subject. Its document number is EDM-816.

Solar Energy and Conservation for Home Heating and Cooling, EDM-817,

explains how solar technology and conservation techniques can be combined to help homeowners save money.

Single free copies can be obtained from ERDA's Technical Information Center, Box 62, Oak Ridge, Tennessee 37830. For multiple orders, request an order form and price information.

More Than $1 Trillion Worth Of Property Now Subject To Local Taxes

Property subject to local property taxation in the United States is now assessed at more than $1 trillion.

In a special study of the property tax base, Commerce's Census Bureau says that the 1975 value of all property subject to local general property taxation was $1 trillion and $96.3 billion, an increase of $223.7 billion over the valuation in 1973 when the last similar study was made.

In 1975, $33.4 billion of property value was exempt from taxation for various reasons, leaving the net assessed value of $1 trillion and $62.9 billion available for taxing.

Excluded from the property tax base were: (1) property owned by nonprofit and otherwise qualifying groups or institutions and used for beneficial purposes such as government, religion, non-profit medical care, and education; (2) new industrial plants exempt for stated periods of time in specific states as an inducement to new industry; and (3) other property exempted by specific legislative action.

Net locally-assessed real property, which represented more than 80 percent of the 1975 net property tax base, increased from $679 billion in 1973 to $853 billion in 1975.

The net total of taxable property included $74.8 billion of state-assessed value and $998.1 billion of locally-assessed value. The state figure is an increase of $15.5 billion over the 1973 figure of $59.3 billion due largely to increases in the value of utilities other than railroads.

In fiscal 1975, property taxes accounted for $50 billion in local tax revenue, or about 32 percent of revenue from all sources, and nearly 82 percent of local government tax revenue.

This special study is part of the Bureau's planning activity for the Property Values Survey to be conducted as part of the 1977 Census of Governments.

Copies of State and Local Government Special Study No. 80, *Property Values Subject to Local General Property Taxation in the United States: 1975*, are available for $1.95 from the U.S. Government Printing Office, Washington, D.C. 20402 or from Commerce Department District Offices in major U.S. cities.

Value of Property Subject To Local Taxation, 1975

(Millions of $)

Area	Gross assessed value			Net assessed value		
	Total	State-assessed	Locally assessed	Total	State-assessed	Locally assessed
United States	**1,096,321**	**74,841**	**1,021,483**	**1,062,916**	**74,809**	**988,102**
Alabama	6,066	1,169	4,897	5,912	1,169	4,743
Alaska	5,981	1,080	4,901	5,981	1,080	4,901
Arizona	5,875	2,026	3,849	5,821	2,020	3,801
Arkansas	3,283	615	2,667	3,283	615	2,668
California	82,743	5,041	77,702	73,246	5,028	68,218
Colorado	8,431	841	7,590	8,431	841	7,590
Connecticut	24,929	—	24,929	24,536	—	24,536
Delaware	3,281	—	3,281	3,232	—	3,232
District of Columbia	7,862	—	7,862	7,862	—	7,862
Florida	99,498	393	99,105	90,636	393	90,243
Georgia	25,776	2,511	23,265	23,870	2,511	21,358
Hawaii	11,598	—	11,598	10,416	—	10,416
Idaho	1,549	283	1,266	1,532	270	1,262
Illinois	53,013	1,350	51,663	53,013	1,350	51,663
Indiana	14,103	1,372	12,731	13,211	1,372	11,839
Iowa	43,729	3,567	40,162	43,729	3,567	40,163
Kansas	7,697	1,204	6,492	7,697	1,204	6,493
Kentucky	31,335	3,565	27,769	30,226	3,565	26,661
Louisiana	6,715	1,392	5,323	5,418	1,392	4,026
Maine	7,447	320	7,127	7,374	320	7,053
Maryland	25,406	4,781	20,625	25,406	4,781	20,625
Massachusetts	29,879	600	29,279	29,879	600	29,279
Michigan	56,815	—	56,815	56,815	—	56,815
Minnesota	10,884	37	10,846	10,884	37	10,846
Mississippi	3,346	707	2,638	2,563	707	1,855
Missouri	13,298	1,622	11,675	13,298	1,622	11,675
Montana	1,362	333	1,029	1,362	333	1,029
Nebraska	6,734	107	6,627	6,152	107	6,045
Nevada	3,338	510	2,828	3,305	510	2,795
New Hampshire	6,813	—	6,813	6,766	—	6,766
New Jersey	72,950	—	72,950	72,941	—	72,941
New Mexico	3,358	1,027	2,330	3,062	1,027	2,035
New York	77,623	3,292	74,331	74,025	3,292	70,732
North Carolina	51,102	5,683	45,419	51,102	5,683	45,419
North Dakota	671	—	602	669	69	600
Ohio	47,395	14,251	33,144	47,395	14,251	33,144
Oklahoma	5,369	1,075	4,294	4,676	1,075	3,601
Oregon	33,641	3,005	30,636	32,009	3,005	29,004
Pennsylvania	23,970	—	23,970	23,970	—	23,970
Rhode Island	5,485	—	5,485	5,345	—	5,345
South Carolina	1,671	770	901	1,671	770	901
South Dakota	3,608	195	3,413	3,608	195	3,413
Tennessee	10,882	1,471	9,411	10,882	1,471	9,411
Texas	31,926	145	31,781	31,926	145	31,781
Utah	2,771	843	1,928	2,771	843	1,928
Vermont	2,282	—	2,282	2,282	—	2,282
Virginia	22,675	1,811	20,865	22,675	1,811	20,865
Washington	46,022	2,711	43,312	45,927	2,711	43,216
West Virginia	8,683	1,657	7,026	8,683	1,657	7,026
Wisconsin	33,283	—	33,283	33,283	—	33,283
Wyoming	2,168	1,410	759	2,158	1,410	747

Note: Because of rounding, detail may not add to totals.

A DEVICE FOR ALL SEASONS: TURNING WASTE HEAT TO ENERGY

Benjamin Franklin would be proud! His admonition to "Waste Not, Want Not," has graduated from being a piece of pious —though largely ignored—folk wisdom to national policy.

In short, now we're saving everything, including the heat that used to be discharged into the atmosphere.

A system that will generate electricity by using industrial waste heat as a "fuel" is being developed by the Sundstrand Corporation of Rockford, Illinois, under a cost-sharing contract with the Energy Research and Development Administration (ERDA).

Sundstrand will design an organic Rankine cycle system (ORC) to capture and use the heat energy usually wasted when fossil fuels are burned in large, stationary diesel engines or to make heat for industrial processes. The firm also will arrange to build and test five demonstration units, each able to produce 600 kilowatts of electricity without using "fuel" in the usual sense.

In the near term, the system may allow utilities to get as much as one-third more electricity from diesel generating systems without burning additional fuel.

With an ORC, the waste heat, instead of being dumped into air or water, is diverted to a heat exchanger where it will heat a working fluid such as toluene, a common ingredient of many household solvents. When the working fluid is boiled, the gaseous vapor is expanded through a turbine and drives an electric generator.

Present day diesel engines used by utilities to generate electric power have efficiencies of only about 35 percent, meaning that 65 percent of the energy value of their fuel is wasted in cooling or is rejected as exhaust heat. By the same token, heat that is produced in industrial processes such as steel or glassmaking is typically wasted, or exhausted up a stack.

The typical utility diesel turns from 35-38 percent of the heat energy from burning fuel into horsepower to drive a generator, losing about 28 percent in cooling operations, and passing about 34 percent up the stack. With the organic Rankine cycle system to capture exhaust heat, 7-8 percent more of the original heat energy can be converted into mechanical or electric energy.

"Large diesel engines of this type are usually amortized over a period of fifteen or twenty years," said ERDA's Dr. John Belding. "Therefore, cumulative fuel savings gained by coupling ORC systems to existing diesels could be enormous over the life of this equipment."

Several important features distinguish the ERDA/Sundstrand cooperative agreement from most other federal R&D contracts. In general, it is a cooperative agreement that recognizes a partnership between the government and the corporation, based on substantial cost-sharing and mutual interest in the success of the project. For example, important management decisions are determined jointly, changes will be made only by mutual agreement, and either party, under certain conditions, may terminate the agreement.

The agreement also includes built-in incentives to encourage Sundstrand to produce equipment that is both extraordinarily reliable and efficient. To the extent that the ORC system meets minimum standards for reliability and efficiency called for under the agreement, ERDA's share of the project cost will be increased, and Sundstrand's share correspondingly reduced.

Of special interest is a provision that will enable the government to recover part or all of its costs—or even make a profit—in return for support of the project. Within five years Sundstrand may either pay back the federal share of the project cost or, alternatively, it may elect to pay the government a "royalty" of 3 percent on its ORC equipment sales during a ten-year period.

Development of the ORC system, including construction and field testing of five 600 kilowatt units, will take place over a four-year period. Sundstrand, with ERDA approval, will select five utility or industrial plants in which the units will be demonstrated.

Project Seeks Recovery Of Untappable Oil On Commercial Scale

Even after an oil field has been drilled and pumped twice, vast supplies of oil remain trapped in deep reservoirs.

Over the next ten years, Marathon Oil Company and the Energy Research and Development Administration will try to demonstrate for the first time on a commercial scale a way for getting that remaining oil.

If the process is successful, it could be used on many fields in north central Texas and the mid-continent to recover several hundred million barrels of oil which cannot be tapped with present technology.

The project, using a process called micellar polymer waterflooding, will be carried out in a 350-acre area of the Robinson field in Crawford County, Illinois.

The technique involves injecting detergent-like chemicals to release trapped oil, followed by a chemically thickened water to control and direct the micellar chemical flow. Finally, plain water forces the oil-chemical mixture to existing wells from which oil can be pumped.

The percentage of oil that can be recovered from U.S. reservoirs is only 32 percent on a national average. About 20 percent can be produced from primary recovery, or the first effort. About 12 percent can be produced with the assistance of secondary and tertiary techniques (the second and third effort), commonly called enhanced recovery.

Marathon has been working on tertiary recovery for some 15 years. The current project was preceded by two sizable pilot tests which Marathon carried out successfully on its own.

The ERDA program for enhanced recovery of oil and gas aims at developing and transferring new recovery technology to the private sector. The program is designed to broaden the participation of private industry through cost-sharing contracts.

With about 50 percent of the costs for field demonstrations to be paid by industry, ERDA expects to add 2 billion barrels of oil and 10 trillion cubic feet of natural gas to U.S. reserves through enhanced recovery by 1985. This would mean an increase of 500,000 barrels of oil per day and three billion cubic feet of natural gas per day.

New Ocean Unit Will Aid Federal, Private Programs

Commerce's National Oceanic and Atmospheric Administration has established an Office of Ocean Engineering.

It will include the existing NOAA Data Buoy Office, the Office of Manned Undersea Science and Technology, and certain functions of the former National Oceanographic Instrumentation Center.

In announcing the new unit, NOAA Administrator Dr. Robert M. White said, "Energy and other crucial offshore development require significant advances in fundamental engineering knowledge. Our knowledge is now inadequate, and the lack of that knowledge is contributing daily to the high cost of continental shelf development."

Not only will the new office coordinate existing NOAA ocean engineering programs; it will initiate some of its own while serving as a focus for technology transfer within the entire marine community.

A major element of the new office's effort will be an ocean instrumentation program useful not only to NOAA but to private marine programs.

Computer Program Aids Architects In Designing Energy-Efficient Buildings

A computer program developed at Commerce's National Bureau of Standards is helping engineers and architects design more energy-efficient buildings.

Computer simulations are often used by engineers to study the thermal performance of buildings in an effort to design energy-efficient heating and cooling systems. Inaccurate load calculations can lead to over-designed heating and cooling equipment that uses more energy and operates at lower efficiency.

The NBS computer program is based on extensive information accumulated over the past decades in various phases of building heat transfer problems, and is intended for use in the design of equipment and air conditioning systems as well as for estimates of building energy requirements.

Originally developed as a research tool, the NBS Load Determination (NBSLD) program has a number of features that allow the accurate determination of heating and cooling loads in buildings. It was developed because most available computer programs were not suitable for analyzing building designs incorporating unconventional or innovative structures, heating and cooling systems, or controls.

NBSLD covers some 300 variables in three categories: the weather, the building, and the way the building is operated. The computer output is presented in the form of a profile of heating and cooling loads on an hourly, daily, weekly, monthly, or yearly basis.

The program enables the merits of various building constructions and systems to be evaluated and has already been used for studies of HUD housing systems and buildings of the Defense Department and the General Services Administration (GSA) where nonconventional designs had to be evaluated.

For example, NBS researchers used the program to help design a GSA office building in Manchester, New Hampshire, that will use one-third less energy than a similar building of conventional design.

The new computer program document contains highlights of the unique features of NBSLD, summaries of various subroutines along with the detailed procedures to use them, a complete Fortran listing, and data preparation forms.

The easy-to-use program is contained in a 398-page document titled, *NBSLD, the Computer Program for Heating and Cooling Loads in Buildings*. It can be purchased for $4.60 a copy from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402. (Order Catalog No. C13.29/2:69).

Calendar Of Business Events

Nov. 28-Dec. 2—Dearborn, Mich.—ELECTRANS, Hyatt Regency Hotel. Contact, Society of Manufacturing Engineers, (SME) P.O. Box 930, Dearborn, Mich. 48128 (313-271-1500).

Nov. 29-30—Columbus—Regional Conference/Workshop on Industry-Education and School-Based Placement Services, Holiday Inn. Sponsor: National Assn. for Industry-Education Cooperation. Contact, Raymond A. Wasil, Rm. 1005 Ohio Dept. of Education, 65 S. Front St., 43215 (614-466-4590).

Nov. 29-Dec. 1—Dallas — National Telecommunications Conference, Fairmont Hotel. Contact, NTC-76, P.O. Box 10645, Dallas, Tex. 75207 (214-690-7123).

Nov. 29-Dec. 1 — Washington, D.C. — Transactional Analysis in Management I, Georgetown Univ. Contact, Betsy Girton, Continuing Mgt. Education Program, SSCE, Georgetown Univ., Washington, D.C. 20057 (703-525-6300).

Nov. 29-Dec. 1—Gaithersburg, Md.—Bicentennial Conference on Mathematical Programming, National Bureau of Standards. Contact, William Hall, A422, Admin. Bldg., NBS, Washington, D.C. 20234 (301-921-3855).

Nov. 29-Dec. 2—Syracuse — Seminars on management and financing in the construction industry, conducted by Jack Miller. For information, Madeline Graeter, Group Communications, Inc., 6101 Southwest Freeway, Suite 401, Houston, Tex. 77057 (713-664-8818).

Nov. 29-Dec. 10—Chicago — Distribution System Planning short course, Institute of Gas Technology. Contact, IGT, 3424 S. State St., 60616 (312-567-3650).

Nov. 30—Pensacola — Productivity Measurement Seminar, Sheraton Inn. Contact, Rick Dye, Research Director, Pensacola Area Chamber of Commerce, P.O. Box 550, 32593 (904-438-4081).

Nov. 30-Dec. 1—Houston — Energy Management in Buildings seminar, Shamrock Hilton. Contact Heidi Kaplan, New York Conference Mgt. Center, 360 Lexington Ave., New York 10017 (212-953-7266).

Nov. 30-Dec. 2—Chicago—Economic and Financial Analysis in Manufacturing, Sheraton Plaza. Contact, Heidi Kaplan, New York Conference Mgt. Center, see address above.

Nov. 30-Dec. 2—Cleveland—Mass Finishing Techniques clinic, Marriott Inn. Contact, Michael Tolzdorf, SME, address above.

Dec. 1 — Ft. Lauderdale — Productivity Measurement Seminar, Holiday Inn-Oceanside. Contact, Bill Ashley, Ft. Lauderdale Area Chamber of Commerce, 208 SE. 3rd Ave., 33302 (305-462-6000).

Dec. 1-3—Atlanta—IBFI Chief Executives Conference, OMNI International Hotel. Contact, International Business Forms Industries/PIA, 1730 North Lynn St., Arlington, Va. 22209 (703-527-6000).

Dec. 1-3 — Washington — First National Forum on Business, Government & the Public Interest. Contact, American Mgt. Associations, 135 West 50th St., New York 10020 (212-586-8100).

Dec. 2-3—New York—New Directions in Securities Litigation, Barbizon Plaza Hotel. Contact: Practising Law Institute, 810 7th Ave., New York 10019 (212-765-5700).

Dec. 6-7 — New York — Fundamentals of Management & Organizational Behavior for Women, Barbizon Plaza Hotel. Sponsor: The Wharton School. Contact: Heidi Kaplan, N.Y. Mgt. Ctr., see address above.

Dec. 6-8 — Orlando, Fla. — Southeastern Engineering Conference and Tool & Mfg. Exposition, Howard Johnson & Sheraton Towers hotels. Contact: SME, address above.

Dec. 6-8—Gaithersburg, Md.—Bicentennial Winter Simulation Conference, National Bureau of Standards. Contact: Paul Roth, B250, Tech. Bldg., NBS, Washingtoin, D.C. 20234 (301-921-3545).

Dec. 7-9 — Cleveland — Drawing Sheet Metal Clinic, Sheraton Inn-Hopkins. Contact: SME, see address above.

Dec. 7-9—Chicago—Electrical Discharge Machining Clinic, Hyatt Regency O'Hare Hotel. Contact: SME, see address above.

Productivity Conference Proceedings Available

The proceedings from last June's conference on productivity measurement, sponsored by the National Center for Productivity and Quality of Working Life, the U.S. Departments of Commerce and Labor and the National Science Foundation, are now available.

Papers reprinted from the conference present techniques of measurement of company and industry productivity, and specific examples of productivity measurement at a division of Alcoa and in the warehousing function. In addition to the papers presented at the conference, the paperbound book contains a description of productivity research programs at the National Science Foundation and a Canadian study on interfirm comparisons.

Single free copies are available from the National Center at 2000 M St., NW., Suite 302, Washington, D.C. 20036 (202-254-9890).

Imports Still Climbing Faster Than Exports

DOMESTIC RECOVERY BOOSTS U.S. PURCHASES SHARPLY BUT SALES GAIN IS MODEST, NINE-MONTH FIGURES SHOW

U.S. foreign trade expanded in both directions in January-September this year, but the growth rate for imports exceeded that of exports by a substantial margin. The disparity in these rates resulted in a large shift in the merchandise trade balance from a surplus in 1975 to a deficit this year, the Commerce Department's Office of International Trade Analysis reports.

Exports were running at a seasonally adjusted annual rate of $113.5 billion in the first nine months, 6 percent higher than the 1975 total. Imports climbed 23 percent over last year to a rate of $118 billion, valued f.a.s. ($126.9 billion, c.i.f.). The trade balance was in deficit $4.5 billion at an annual rate, based on f.a.s. values ($13.4 billion with imports valued c.i.f.), compared to a surplus of $11 billion last year.

The modest growth of exports so far in 1976, evident particularly in the early months when sales abroad actually turned downward, appears mainly related to the impact of recessionary conditions abroad early last year as well as the subsequent weakness of the cyclical rebound in key foreign countries. The more vigorous rise in U.S. imports this year, compared to the U.S. export increase, reflects more buoyant economic conditions in this country during the recovery.

In contrast to 1975, when trade in both directions fell in real terms, the volume of both exports and imports rose this year. Moreover, this year's growth in overall trade prices represents a deceleration from the advances posted in 1975.

On a quarterly basis, U.S. trade displayed an uneven pattern so far in 1976. Exports, after declining in value in the first quarter, posted a sizable increase in the subsequent three months, but slowed considerably in July-September. Imports, on the other hand, rose strongly in January-March, decelerated in the second quarter, but expanded sharply again in the most recent three-month period.

Nonfarm sales abroad climb

The rise in U.S. exports so far this year was led by increased sales of nonagricultural products, which continued to expand as in each of the past 16 years though at the slowest rate since 1971. Nonfarm sales in January-September climbed 8 percent over the same period last year to $67.6 billion. After a first quarter drop, these shipments advanced in the next three months and expanded further in July-September. Machinery exports, which account for more than one-third of U.S. nonfarm sales abroad, expanded 10 percent over the comparable 1975 period, half of last year's rate of advance. Sales of most types of machinery rose. Deliveries of computers and parts expanded after a fractional advance last year. Increases were also recorded for well drilling machinery and air conditioning equipment. Sales of telecommunications equipment and power machinery and switchgear were higher. The rebound in production of consumer electronic goods abroad, particularly at U.S. subsidiary plants, led to a sizable recovery in shipments of electronic components, many of which return to this country incorporated into finished products. On the other hand, construction equipment sales were modestly higher this year in contrast to last year's big increase, while deliveries of office and textile machinery declined.

Exports of motor vehicles and parts continued to climb substantially in January-September. Deliveries to U.S. subsidiaries in Canada expanded 17 percent in value, slightly faster than in 1975, while those to non-Canadian destinations slowed to a 2 percent rise following a jump of more than a half last year. Most of the expansion to Canada stemmed from greater shipments of parts in response to stepped-up vehicle production there for the U.S. market. Automotive exports to other countries were limited by a sharp falloff in truck deliveries to Iran from last year's exceptionally high level, but shipments of cars and parts continued to advance.

After posting a slight decline last year, chemical exports expanded 13 percent in the first nine months of 1976. The advance was largely the result of recoveries in shipments of organic chemicals and plastic materials which had fallen sharply during the recession abroad. Partly offsetting these increases was a drop-off in the value of fertilizer exports caused by a steep decline in prices from the high levels prevailing last year, reflecting a better balance between world supply and demand.

Textiles, paper, and lumber were among other industrial supplies and materials to record substantial export increases, after having declined in value in 1975 due to slumping foreign economic activity. On the other hand, with foreign steel demand remaining sluggish during much of this year, U.S. exports of iron and steel mill products dropped one-fourth from their value in the comparable 1975 period. Similarly, deliveries of steel scrap and coal, major steel-making materials, fell substantially.

Exports of agricultural products advanced to $17.5 billion in January-September, representing a 6 percent increase over the same period last year. Increased U.S. grain and oilseed supplies led to a lower average export unit value for farm products compared to 1975, thereby holding down the growth in the value of these exports. Among individual products, corn shipments posted the largest gain, boosted by heavy deliveries to the USSR and Eastern Europe. Sales of soybeans and oil-cake and meal also expanded substantially, recovering from last year's declines. Meat and tobacco shipments also expanded. Wheat and rice exports, however, fell substantially from January-September 1975 levels.

Industrial, consumer imports rise

In contrast to the small rise recorded in 1975, purchases of petroleum and products rose 27 percent in value to $23.3 billion, which accounted for more than a fourth of the overall import increase so far in 1976. Most of this advance con-

Industrial Supplies, Consumer Goods Swell Imports

F.a.s. transaction values in millions of dollars, seasonally adjusted

	Jan.-Sept. 1975	Jan.-Sept. 1976	Change
Industrial supplies, total	36,876	44,939	+8,063
Petroleum	18,388	23,333	+4,945
Nonferrous metals	1,854	2,663	+ 809
Lumber	642	1,014	+ 372
Chemicals	2,754	3,349	+ 595
Consumer goods, total	17,371	23,949	+6,578
Passenger cars	5,234	6,826	+1,592
Auto engines and parts	2,269	3,831	+1,562
Clothing	1,642	2,688	+1,046
Consumer electronics	770	1,279	+ 509
Foods, feeds, beverages	7,180	8,528	+1,348
Capital goods	8,008	9,596	+1,588

sisted of greater volume as domestic demand rose while crude production here continued to fall. The value of these petroleum purchases was further boosted by a five percent increase in import prices.

Crude arrivals were up sharply, but imports of refined products fell a bit as a decline in distillate fuel oil entries more than offset greater purchases of residual fuel. Imports of petroleum into the Virgin Islands, which are reported separately in Census Bureau data, amounted to another $1.6 billion or a 19 percent increase in January-September. These arrivals were mostly crude oil to be refined for shipment to the United States.

Imports of most types of industrial supplies other than petroleum also expanded vigorously. Entries of nonferrous metals, particularly refined copper, zinc, and aluminum climbed more than one-half as the growth of industrial production in the U.S. generated greater demand and stimulated inventory rebuilding. Reflecting a sharp third-quarter upturn, lumber and plywood entries rose in value over last year, benefiting from a pickup in construction activity. Tire imports were up significantly, partly as a result of the nearly four-month rubber strike in this country. Chemicals and woodpulp also recorded an increase, as did the value of newspaper imports despite a falloff in quantities received. Steel imports, at $3.2 billion, declined from very high levels of about two years ago, although the volume rose 8 percent over the January-September period of last year.

Nearly half of the increase in consumer imports resulted from greater automotive entries. Arrivals of new cars from U.S. subsidiaries in Canada expanded by almost $600 million; vehicle parts from Canada also rose sharply. A sizable increase was noted in car imports from Japan reflecting a surge in U.S. sales and a buildup of inventories here. In contrast, imports of West German cars fell. Among non-automotive consumer items, purchases of electronic products, clothing, and footwear grew steadily.

After declining last year, the value of food and beverage imports climbed 19 percent in January-September, largely as a result of higher prices. Coffee entries, at $1.9 billion, rose nearly three-fifths in value, but were slightly lower in volume. Reduced world coffee supplies, resulting primarily from severe frost damage in Brazil, accounted for much of the huge price increase. Higher prices caused the bulk of the upturn in the value of meat and fish arrivals. On the other hand, sugar imports dropped $623 million as larger world sugar production and increasing stocks depressed sugar prices.

Capital goods imports, unchanged in value last year, expanded 20 percent in the first nine months of this year, in part because of a pickup in business investment expenditures here. Purchases of office equipment, textile and leather machinery and parts, and most other types of machinery also rose in value. Arrivals of trucks from Canada were 45 percent greater. Aircraft engines and parts receipts, however, were greatly reduced.

Area trade developments

Exports to most major world areas expanded this year. Sales to Canada, the European Community and the communist countries grew at an accelerated rate compared to 1975. Deliveries to Japan managed a small increase following last year's decline. The growth in exports to the oil-exporting LDCs was substantially reduced, however, and shipments to the other LDCs fell. Imports from all regions climbed, led by arrivals from Japan and both the oil- and nonoil-exporting developing countries. Entries from Canada and the EC recovered from the declines of last year.

TRADE CONVENTION BACKS MULTINATIONAL COMPANIES AGAINST GLOBAL CHARGES

The multinational corporation, supplying a trillion-dollar underpinning to today's global economy, is far too important both to the industrialized and developing nations to be brought down by charges of corrupt practices, exploitation and political manipulation.

This was the message addressed to the U.S. public by the nation's international business community as it met in New York this month at the 63rd National Foreign Trade Council convention. The context is a period that was defined for the delegates by a Texaco executive as the "multinationals' 'winter of discontent'" and by a UN official as a time of challenge to "existing institutions to prove their legitimacy."

Cecil J. Olmstead, vice president of Texaco, pictured the growing worldwide criticism of multinational corporation activity in the decade of the '70s, culminating in "the lightning bolt of bribes and other questionable payments abroad that struck in the very countries which have been strong supporters of free enterprise.

"This matter threatens to become the major criterion by which to judge the general conduct and role of the multinational corporations," he said, offering a view shared by many other speakers. He declared that it obscures a genuine analysis and resolution of the real problems in this field and produces a serious loss of confidence on all sides of the business-public-government relationship.

The convention's policy declaration touched on the attacks against multinationals in affirming "It is of the utmost urgency for governments and multinational enterprises to reach an understanding of and solutions to the problems which threaten the relationships between them and with their publics, since the need for continued benefits from operations of multinational enterprises has never been greater."

Restoration of trust was also the concern of keynoter Howard Morgens of Procter & Gamble, who put it on a personal basis: "It is not enough to say that our businessmen are just as ethical as lawyers or politicians or government officials. American businessmen must lead the way in setting ethical standards for their own conduct wherever they do business. Only by doing so will they continue to be welcomed and trusted."

Morgens placed a trillion-dollar dimension on the present value of the goods and services produced annually by the foreign affiliates of all multinational companies. He said this is the equal of the value of all foreign trade.

Two current efforts to regulate the

activities of multinational firms were placed under a spotlight by the convention: the voluntary guidelines for such firms and for host governments issued earlier this year by the Organization for Economic Cooperation and Development (OECD), and a code being prepared by the UN Centre on Transnational Corporations.

Responding to a criticism of the OECD guidelines as "trivial" made by Dr. Raymond Vernon of the Harvard Graduate School of Business Administration, Deputy Assistant Secretary of State Paul H. Boeker said they should be understood primarily as a beginning effort and as a "package" that is addressed both to companies and to host governments.

Boeker said that the guidelines had drawn an "overwhelmingly favorable response from U.S. business."

Boeker asked the businessmen for a concrete first example of adherence to the guidelines in the form of more detailed financial disclosure: "I am hopeful that most U.S. corporations that consider themselves multinational enterprises will consider it worthwhile to align the financial reporting in their annual reports to stockholders with the OECD guidelines. This concrete step, in response to voluntary guidelines, would be the clearest indication of broad support among U.S. business. Through extensive consultation with U.S. business during the course of the negotiation of these guidelines we have, I think, successfully assured that financial disclosure with the OECD standard protects business confidentiality fully."

Boeker assured the delegates that U.S. officials on their part would work to see that the guidelines are taken seriously by businessmen in all the 24 OECD nations, and that host government actions abroad that appear to breach the guidelines would be "promptly submitted to the discipline of the consultation process."

The convention policy declaration welcomed provisions of the OECD guidelines for their "constructive approach" and recommended that they be given "test by experience."

Klaus A. Sahlgren, executive director of the UN Centre on Transnational Corportations, noted that the UN code is still about two years from completion. Just ahead, however, is a request from his office to a number of U.S. corporations for a "trial run of reporting for their enterprises as a whole, as well as for parent and main subsidiaries." He said this effort, which would be confidential and non-identifiable as to substance, would be made to determine some of the practical problems in the field of obtaining transnational corporate information.

U.S. trade policy in several areas was bluntly challenged by two speakers from abroad. Edmund Dell, Britain's Secretary of State for Trade, argued that the United States is harming its leadership role in trade negotiations by its recent imposition of quotas on imports of specialty steel and by its procedures in countervailing duty and anti-dumping cases. Saudi Arabian Ambassador Ali A. Alireza commented vehemently on recent U.S. actions to counter the Arab boycott of Israel, which he defined as "the equivalent of America's long-standing laws against trading with the enemy." He contended that the boycott does not amount to racial or religious discrimination.

New Tax Act Shrinks DISC Export Incentive, Phases Out Another

The favorable tax treatment afforded to U.S. exports accomplished through Domestic International Sales Corporations (DISCs) has been scaled back, and the Western Hemisphere Trade Corporation tax benefit is being phased out.

These are the noteworthy features of the recently passed Tax Reform Act of 1976 which affect exporters. The act has numerous other provisions that touch on international business activity.

Under the DISC program, instituted at the beginning of 1972, U.S. exporters could set up special export corporations which are allowed to defer federal income taxes on 50 percent of profits earned from export sales.

The new tax act restricts this benefit for DISCs that have annual earnings in excess of $100,000, by keying the amount of benefit to an increment of their previous export performance.

Thus, a DISC earning in excess of $100,000 may take advantage of the standard 50 percent deferral only to the extent that the value of its exports in the tax year reported exceeds 67 percent of the annual average of its previous base period performance. Until 1980 the base period will comprise the four years from 1972 through 1975, at which time the base period will begin to progress one year annually. This means that a new DISC, that is, one with its first tax year beginning in 1976 or thereafter, will not have to apply this incremental limitation during the first four years of operation.

Also, the DISC tax deferral is no longer available for export sales which result from illegal payments and bribes to officials of foreign governments or compliance with the Arab boycott, and has been cut in half for exports of military property.

According to boycott guidelines issued by the Treasury Department on Nov. 3, all DISC shareholders must file an international boycott report (IRS Form 5713) if they have any exports to Bahrain, Egypt, Iraq, Jordan, Kuwait, Lebanon, Libya, Oman, Qatar, Saudi Arabia, Syria, United Arab Emirates, Yemen Arab Republic and the People's Democratic Republic of Yemen.

The bribery and boycott provisions apply to all sales resulting from illegal payments made or boycott agreements concluded or continuing in effect after Nov. 3, 1976, and the military sales and incremental limitation provisions to all affected DISCs with tax years beginning after Dec. 31, 1975.

The Western Hemisphere Trade Corporation tax benefit is an effective 14 percentage point reduction in the 48 percent corporation tax rate, available since 1942 to U.S. businesses which invest in, or trade with, countries of the Western Hemisphere. It will be phased out over a period of four years. Starting with tax years beginning in 1976, the benefit shrinks to only an 11 percentage point reduction in the tax rate, and will subsequently drop 3 percentage points each tax year until the benefit completely disappears for tax years after 1979.

For further information on these changes, call or write the Foreign Business Practices Division, Office of International Finance and Investment, U.S. Department of Commerce, Washington, D.C. 20230, telephone 202-377-4471.

Tunis Unveils New Plan At Washington Meeting

A Tunisian delegation recently used a Washington meeting to unveil Tunisia's new (1977-1981) five-year plan, and discussions centered on finding a useful and rewarding role for U.S. business in the implementation of the plan. It calls for investment expenditures of $10 billion during the five-year period and an average annual growth rate of 7.5 percent.

The Oct. 19-21 talks of the U.S.-Tunisian Economic Commission covered all aspects of the Tunisian investment climate, including Tunisia's incentive legislation, good location, infrastructure, and favorable cost factors. The Tunisians expressed particular interest in investments by U.S. enterprises in agribusiness.

In discussions on Tunisia's economic performance in recent years, it was noted that Tunisia had maintained a significant real growth rate (9 percent in 1975) and a minimum of inflation (9 percent in 1975). These favorable trends, together with the expenditures envisaged in connection with the new five year plan, indicate that prospects for U.S. business in Tunisia are better than ever.

Trade matters were also discussed, including the Tunisian desire to diversify its exports to the U.S., which are now dominated by exports of crude oil.

Official Trade Briefs

This article is another in a series of reports that describes actions affecting world trade, as compiled by the Legislative and Tariff Policy Division of the International Economic Policy and Research Bureau's Office of International Trade Policy.

THE PRESIDENT

New Public Laws: On Oct. 20, The President signed into law the first general revision of U.S. copyright law since 1909, P.L. 94-553, to be effective Jan. 1, 1978. The revised law includes an amendment to the "Manufacturing Clause," which increases from 1,500 to 2,000 the limit on the number of copies of English language **books** by U.S. authors produced abroad which can be imported into the U.S. The amendment further provides an exception for Canada, whereby that country will not be subject to the "Manufacturing Clause" limitation at all. Most significantly, PL. 94-553 provides that the "Manufacturing Clause" will expire on July 1, 1982, thereby allowing unlimited copies to enter the U.S. from any country at that time. The conference report on the bill indicated that repeal of the Canadian exception could result if Canada does not become a member of the Florence Agreement under which duty-free entry is accorded to certain books.

President Ford also signed into law the following bills: H.R. 12033 (P.L. 94-560), to continue until June 30, 1979, suspension of duty on **manganese ore** (including **ferruginous ore**) and related products; H.R. 2177 (P.L. 94-511), to exempt from duty **certain aircraft components** previously exported from the U.S.; and H.R. 13955 (P.L. 94-564), to amend the Bretton Woods Agreement Act, including an amendment to increase the U.S. quota in the **International Monetary Fund** by approximately $2 billion.

Enrolled Enactment Vetoed: President Ford withheld his approval from H.R. 4654, a bill to provide Day's Sportswear, Inc., with relief in the form of a monetary settlement of that firm's claim against the U.S. for a credit or refund of customs duties on certain textile importations. The President cited as reasons: 1) that similar claims are presently being litigated in U.S. Customs Court and that approval of H.R. 4654 could "inappropriately predispose" the court's ruling; 2) that H.R. 4654 would constitute preferred treatment of one importer over others having similar claims; and 3) that private relief legislation is only appropriate after all other avenues of recourse have been pursued.

SPECIAL TRADE REPRESENTATIVE

GSP: The interagency Trade Policy Staff Committee has begun its product review of requests for additions and deletions in the list of products eligible for duty-free treatment under the Generalized System of Preferences (GSP). Public hearings on the products being reviewed will commence in mid-December. It is intended that any action to be taken as a result of this review will be implemented by March 1, 1977.

Section 301, Foreign Trade Practices: The American Iron and Steel Institute has filed a petition under section 301 of the Trade Act of 1974 alleging unfair trade practices by the European Coal and Steel Community (ECSC) and the Japanese Ministry of International Trade and Industry (MITI). The Institute alleges that a voluntary restraint arrangement between the ECSC and MITI, setting limits on Japanese exports of steel to the European Community, diverts significant quantities of Japanese steel exports to the U.S. It is further alleged that the agreement violates Articles XI and XIII of the General Agreement on Tariffs and Trade (GATT).

TREASURY DEPARTMENT

Antidumping: The Department has rendered a tentative determination that **fully automatic digital scales** imported from Japan are not being sold in this country at less-than-fair value (LTFV) within the meaning of the antidumping law.

In other antidumping action, the Department has announced initiation of an investigation into the possibility of sales at LTFV of **self-propelled bituminous paving equipment** from Canada. The announcement followed a summary investigation conducted by the U.S. Customs Service which resulted in information tending to indicate that prices of the merchandise exported to the U.S. are less than prices of the same or similar merchandise sold in Canada. U.S. imports are estimated at $2 million annually.

Treasury has also announced a six to eight month extension of the investigation period in the antidumping case concerning **metal-walled above-ground swimming pools** from Japan. Tentative determination in that case is now due by Dec. 21. Imports are about $4.5 million annually.

Countervailing Duty Cases: Affirmative preliminary determinations that bounties or grants are being paid or bestowed on subject goods within the meaning of the countervailing duty law, have been recently rendered in three cases: **groundfish** from Canada; **nuts, bolts and cap screws** from Japan; and **bicycles** from the Republic of China.

Customs Regulations: Proposed revisions of the customs regulations relating to countervailing duties were published in the *Federal Register* of Sept. 21. The deadline for submission of written comments on the proposed changes has been extended to Dec. 17. Interested persons should address their views to the Commissioner of Customs, Attention: Regulations Division, Washington, D.C. 20229.

LABOR DEPARTMENT

Adjustment Assistance—New Investigations: The Labor Department has initiated 90 new investigations to determine whether workers in various industries are eligible to apply for trade adjustment assistance. Many of these investigations involve the **shrimping, clothing** and **footwear** industries. The investigations, which must be completed within 60 days, will determine whether increased imports contributed importantly to the unemployment of a significant number of workers. If so, the Department may certify that the affected workers are eligible to apply for adjustment assistance. Such assistance, under provisions of the Trade Act of 1974, may include cash trade readjustment allowances, training, testing, counseling, job placement, job search grants and relocation allowances.

Certifications: The Department has certified workers at a number of firms as eligible to apply for trade adjustment assistance. These workers have been or may become unemployed as a result of increased imports. The workers certified (numbers where available are approximate) are or have been employees of the following firms: Brown Shoe Co., Union, Mo. **(shoe heels)** 200; Crompton and Knowles Corp., Worcester, Mass. **(casting and power loom parts)** 20; Royal Clothing Co., Philadelphia **(men's suits and sport jackets)** 15; Evans-Aristocrat Industries, Inc. (Billfold Corp. of America; Cardinal Leather Products, Inc.; and E. A. Products, Inc.), Gurabo, P.R. **(wallets and clutch purses)** 200; Enzel-Arthur Richards Mfg. Corp., New York **(men's suit coats, suit pants)** 105; C. M. Gray-Premier Marble Corp., Long Island City, N.Y. **(marble cutting and polishing)** 5; Indiana General Electro-Mechanical Products, Oglesby, Ill. **(D.C. motors)** 130; Bethlehem Steel Corp., Seattle **(industrial fasteners)** 90; Central Screw Co., Sonoma, Calif. **(standard steel screws)** 15; and Bethlehem Steel Corp., Lackawanna plant, Woodlawn, N.Y. **(carbon steel structural shapes and piling)** 400.

Denials: The Department denied petitions for trade adjustment assistance for workers of the following companies:

Trade-Related Legislation Enacted During 94th Congress

BILL NO.	DESCRIPTION	PUB. LAW
H.R. 7709	To continue until June 30, 1978, existing suspension of duty on certain istle.	94- 46
H.R. 7728	To suspend until the close of Oct. 31, 1975, the duty on catalysts of platinum and carbon used in producing caprolactam.	94- 75
H.R. 3361, 7731	To suspend duty on open-top hopper cars exported for repairs or alterations on or before June 30, 1975.	94- 76
H.R. 5509, 7710	To provide duty-free treatment of watches manufactured in any insular possession in the U.S. if foreign materials do not exceed 70 percent of total value.	94- 88
H.R. 8191	To continue through June 30, 1978, existing suspension of duties for metal scrap.	94- 89
H.R. 7715	To extend through June 30, 1978, period during which certain dyeing and tanning materials may be imported duty-free.	94-108
H.R. 7706	To suspend duty on natural graphite through June 30, 1978.	94-120
H.R. 200	To provide for a 200-mile fishing management zone, on interim basis.	94-265
H.R. 9721	To authorize increased participation by U.S. in Inter-American Development Bank, entry of non-regional members and the Bahamas and Guyana in Inter-American Development Bank, and participation of U.S. in African Development Fund.	94-302
H.R. 13680	To authorize funds through fiscal year 1977 for international security assistance and arms export activities.	94-329
H.R. 11321	To suspend until July 1, 1978, duty on certain elbow prostheses imported for charitable therapeutic use or free distribution by certain public or private nonprofit institutions.	94-451
H.R. 10612	Tax Reform Act of 1976.	94-455
S. 2829	International Investment Survey Act.	94-472
H.R. 2177	To exempt from duty certain aircraft components previously exported from U.S.	94-511
S. 2193	To provide increased participation by U.S. in Asian Development Bank.	94-537
S. 22	For general revisions of the Copyright Law, title 17 of the United States Code.	94-553
H.R. 12033	To continue until June 30, 1979, suspension of duty on manganese ore (including ferruginous ore) and related products.	94-560
H.R. 13955	To amend the Bretton Woods Act, including an amendment to increase the U.S. quota in IMF to approximately $2 billion.	94-564
H.R. 421	To amend the Tariff Schedules of the U.S. to permit importation of upholstery regulators and upholsterers' pins duty-free.	94-625
H.R. 11273	To provide for regulation of movement in foreign commerce of noxious weeds and potential carriers thereof.	94-629
H.R. 15977	To amend Export-Import Bank Act of 1945.	94-646

Chilton Metal Products Div. of Western Industries, Inc., Chilton, Wis. **(disposable propane cylinders, gasoline cans, etc.)** 200; C-E Cast Equipment Co., Martin's Ferry, Ohio **(foundry equipment)** 185; Kenosha Auto Transport Corp., Springfield, Ohio **(delivery trucks)**; Hiatt Shoe Plant of Stride Rite Mfg. Corp., Lawrence, Mass. **(children's footwear)** 30; Murphy's Wholesale Tailors, New Orleans **(men's custom-made suits)** 30; International Field Data Corp., Houston **(assembly of data on petroleum fields)**; Superior Plastics, Inc., Chicago **(custom molded plastic parts)** 70; Rockwell International, Foundry and Production Equipment Division, Reading, Pa. **(iron castings and printing equipment)** 400; Burndy Corp., Toledo **(printed circuit board connectors)** 80; Stride Rite Shoe Co., Newburyport, Mass. **(children's shoes)** 5; Leisure Mfg. Co., Haverhill, Mass. **(women's boat deck sandals)** 5; Lowell Shoe Co., Inc., Lowell, Mass. **(women's duty shoes)** 10; Cardinal Shoe Corp., Lawrence, Mass. **(women's footwear)**; Jonnell Shoe Co., Lawrence, Mass. **(women's casual canvas shoes)** 90; Paris Shoe Co., Inc., Lowell, Mass. **(men's footwear)**; Star Metal Products Co., Inc., Cleveland **(parts for metal fastener machinery)** 10; Continental Screw Co., Inc., New Bedford, Mass. **(screws)**; Bethlehem Steel Corp., Lackawanna plant **(steel ingots, blooms** and **slab, carbon steel sheet** and **strip, special products)** 1600; Crompton and Knowles Corp., Grand Street Plant, Worcester, Mass. **(automotive parts)**; Enzel-Arthur Richards Mfg. Corp., New York **(men's suit vests)**; C. M. Grav-Premier Marble Corp., Long Island City, N.Y. **(marble setting)**; Bethlehem Steel Corp., Seattle **(railroad spikes)**.

INTERNATIONAL TRADE COMMISSION

Antidumping Cases: The International Trade Commission (ITC) has determined that imports of **electrolytic fixed capacitors** from Japan, which are being sold at less-than-fair value (LTFV) in the U.S., are not injuring and are not likely to injure a domestic industry. As a result, antidumping duties will not be assessed.

The Commission has instituted two new investigations, following Treasury's advice that imports of certain products are being or are likely to be sold at LTFV. The investigations will examine whether LTFV sales of **melamine in crystal form** from Japan and of **certain portland hydraulic cement** from Mexico are causing injury to the domestic industries.

Section 337—Unfair Trade Practices: With regard to the investigation of **reclosable plastic bags,** the Commission has announced its decision to report to the Secretary of the Treasury, pursuant to section 337 (b) (3) of the Trade Act, its finding that certain matters relating to

the possibility of a bounty or grant being paid or bestowed by the Republic of China may come within the purview of the countervailing duty law. The Commission also announced that the unfair trade practices aspects of the case would be the subject of a hearing at 10 a.m., Dec. 16, in the Commission's Hearing Room, 701 E Street, NW., Washington, D.C. Requests to appear should be filed, in writing, with the Secretary of the Commission by noon on Dec. 13.

In another action, the Commission has followed the recommendation of the presiding officer in granting the motion of the ITC investigative staff to terminate the investigation on **dry wall screws,** as no violation of section 337 was found.

Finally, a hearing in connection with the investigation of certain **above-ground swimming pools** is scheduled to commence Nov. 30 at 10 a.m., Room 610, Bicentennial Bldg., 600 E Street, NW., Washington, D.C.

Import Relief: The ITC has initiated an escape clause investigation concerning the effects of imported **television receivers** on domestic producers. The initiation of this investigation, the 19th initiated under section 201 of the Trade Act of 1974, followed receipt of a petition filed by representatives of the U.S. television industry for import relief in the form of quantitative restrictions. Public hearings in connection with this matter will be held beginning Jan. 11 in Chicago at a time and place to be announced; and in Washington, D.C., 10 a.m., Jan. 18, in the Commission's Hearing Room.

In other import relief action, the Commission will hold a public hearing in connection with the section 201 case dealing with **sugar** (see Trade Briefs, Oct. 25) beginning at 10 a.m., Nov. 30 in San Francisco at the Tax Court, Room 2021, Federal Bldg., 450 Golden Gate Ave.

Revised Hearing Date—Study of the Watch Industry: The date of commencement of the public hearing in connection with the ITC investigation of competitive conditions in the **watch industry** has been changed to Jan. 4 at 10 a.m. The hearing will be held in the Commission's Washington Hearing Room, and requests to appear must be received by the Secretary by noon on Dec. 30.

INTERNATIONAL

Foreign Anti-Dumping Actions: Affirmative preliminary determinations of dumping have been announced by Revenue Canada in regard to **pipeline steam controls** and **bacteriological culture media** in prepared form in tubes and plates, both products originating in or exported from the U.S. The cases have been referred to the Anti-dumping Tribunal for consideration of material injury to a Canadian industry.

Two other foreign dumping actions involving United States products have been recently terminated. In the U.K., a complaint alleging dumping by a U.S. manufacturer of **single beam atomic absorption spectrophotometers** was withdrawn; and in Canada, dumping of certain **cat food** from the U.S. has been found not to cause material injury to Canadian production of like goods. Antidumping duties will therefore not be assessed.

Foreign Safeguard Actions Affecting U.S. Traders: Quantitative restrictions have been recently imposed by Canada and Australia on certain products of interest to U.S. exporters:

The Canadian Minister of Industry, Trade and Commerce has announced a six-month quota on **double knit fabrics,** limiting imports during that period, begining Oct. 7, to approximately 4.5 million pounds. This is an interim action taken in accordance with a finding that such imports cause or threaten serious injury to Canadian production of those fabrics. The U.S. supplies about 34 percent of total imports, which were approximately 4.6 million pounds during the first six months of 1976.

In Australia, the Ministers for Industry and Commerce and for Business and Consumer Affairs have announced the imposition of tariff rate quotas for the period Sept. 1 to May 31, 1977 on imports of certain **uncoated paper and paperboard.** Consequently, imports at the normal rate of duty (20 percent ad. val.) are restricted to an amount equalling 45 percent of total imports on a weight basis during fiscal years 1975 and 1976. Imports in excess of that amount are subject to an additional duty of 15 percent ad valorem. The action was taken to protect the local industry against injury from imports of which the U.S. supplies 28 percent (approximately $2.55 million in 1976). The question of the need for longer-term assistance to the industry is under consideration.

DISC: The United States has been notified of findings by panels of experts under the General Agreement on Tariffs and Trade (GATT) that the practices of four countries, including the Domestic International Sales Corporation (DISC) program of the United States, constitute export subsidies in violation of Article XVI of the GATT. The other three similar findings concerned certain export tax practices of Belgium, France and the Netherlands. In these four related actions, the European Community (EC) had challenged the GATT legality of DISC, and the U.S. had complained against the three EC member state tax practices in 1974.

The United States plans to propose consultations with interested governments following a meeting Nov. 12 of the GATT Council at which the panel reports were filed. The purpose of these talks will be to achieve a mutually satisfactory solution to the problem of the trade distortive effects of tax practices. Because of the importance of this widespread problem, multilateral as well as bilateral consultations are required as soon as possible. The Administration believes that an internationally satisfactory resolution is essential, rather than uncoordinated unilateral changes in domestic law or policy.

There is no direct effect of the panel's decision on United States law. The DISC is a part of the U.S. tax code and will remain so until the Congress legislates a change in the law. If any proposed legislation is developed, it will follow the normal legislative process, including public hearings.

France Is Set To Implement New Product Language Law

French Law No. 75-1349 makes use of the French language mandatory on labels, presentation leaflets, instruction manuals, descriptions of contents, invoices and receipts, warranties and advertising for products and services sold on the French market. (Exempted are foreign products wellknown in France.) Since the aim of the new law is to protect the consumer, its enforcement is expected to fall more strictly on consumer goods than on capital goods.

For firms employing personnel in France, the law also makes it obligatory to provide a French version of the employment contract. Also, contracts between French public bodies and contractors must be written in French, in addition to any other language.

Although the law provides for an effective date of Jan. 1, 1977, a few months delay in implementation is anticipated. The implementing regulations, which are still in preparation, will provide for certain exceptions. For example, an exception may be made for shipments comprising only one or a few items. A three-month exemption may be provided for goods already in stock.

French officials preparing the implementing regulations have agreed to consider comments regarding potential problems that the regulations may cause U.S. exporters. Comments should be addressed to Harold A. Bratt, Director, Industrialized Nations Division, Office of International Trade Policy, U.S. Department of Commerce, Washington, D.C. 20230. Comments must be in writing and received in Washington by Dec. 15 in order to allow for their evaluation and transmission to French authorities. Copies of an unofficial English translation of the law may be obtained from Commerce Department District Offices.

U.S. FIRMS SELL AT U.K. SHOW, AS INDUSTRIES LOOK TO EFFICIENCIES

Reflecting the current economic situation in the United Kingdom, most British firms are concerned with cutting costs, increasing productivity, and otherwise improving overall cost-effectiveness. The government, meanwhile, in its effort to spread industry—now centralized in the Midlands—throughout the country, offers tax and other incentives to relocating or new establishments.

With this picture in mind, it is not surprising that the U.S. exhibitors at PEMEC '76, a plant engineering and maintenance exhibition in Birmingham, sold $785,500 worth of equipment off the floor, and project $5.9 million worth of orders as a result of participation. Twenty-four U.S. firms displayed a variety of production and plant "aids to industry." Market observations on some of the product categories follow:

Pollution control equipment involved the highest number of U.S. exhibitors and produced the highest floor sales figures. Simple, automatic oil waste removal systems generally are not available from domestic and third country suppliers, and U.S. producers should continue to find acceptance in an ever-increasing market sector. Certain blowers, exhausters, and filtration systems will find a strong market, as government and industry become ever more aware of the necessity of protecting the environment.

In construction, portable rollforming and metal building fabrication machinery is almost unique, and the U.S. producer found an untapped market at PEMEC. Interest was keen in fiberglass products. Manufacturers of telescoping work platforms met with strong competition from U.K. and third country suppliers. Quality, safety, portability, price, and local logistic support are important criteria for buyers.

In materials handling equipment, manufacturers of forklift trucks met with heavy competition; joint ventures or licensing may be the best methods of entering the market. Light weight, portable and relatively inexpensive hand-operated moving and lifting equipment enjoy a good market because the demand for such devices cuts across every facet of industry, and competitors are few.

As for metalworking and finishing tools, the "on-site, in-place flange facing, bearing journal, pipe beveling and internal boring tools and pick-and-place units" on display found a large market. Industrial portable electric hand tools and safety and fatigue mats, though limited in scope, are available locally; U.S. suppliers who can furnish more extensive lines at reasonable prices will find a strong market.

Manufacturers of electric generator sets may find Britain a difficult market to enter with direct imports; but competitively priced U.S. equipment can capture a larger market share if the U.S. reputation for quality and reliability is maintained. High-quality portable power distribution units appear to be in great demand.

New roof maintenance products and balloon-like storage tank liners found a ready market during the exhibition. Compressor channel valve parts and assemblies also were well accepted.

Sales At Brno Fair's U.S. Pavilion Top Last Year's

Floor sales from the U.S. pavilion at the recent Brno Engineering Fair reached almost four times those of last year, even though there were more exhibitors in 1975. One company concluded a direct sale to the Soviet Union in addition to its business in the host country. Several exhibitors consider that participation in this annual event is essential for doing business in the Czechoslovakian market. Two firms appointed local representatives as a result of their contacts in Brno.

This year's U.S. exhibition was comprised of three product categories: materials handling equipment; electronic, electronic measurement, computer and peripheral equipment; and mechanical, hydraulic, and pneumatic seals, butterfly valves, compressor parts and gaskets. Modern, innovative equipment not produced by socialist countries is considered

AT SHOW IN BIRMINGHAM—*Visitors attending the recent U.S. exhibition at Pemec '76, focusing on plant engineering and maintenance equipment, take a close look at O'Brien Machinery's tandem generator set. In photo at right, M. S. Poskitt, representative for Pick-O-Matic, provides technical specifications on the Michigan firm's pick-and-place system.*

BUYERS AT BRNO—*H. Wetzel (center), sales engineer, and Mrs. D. Ottinger, assistant director of East Europe division, Garlock, Inc., demonstrate a teflon-lined valve to two interested buyers at the U.S. exhibition in Czechoslovakia.*

to have the best sales potential—especially products in the latter two groups.

Officials from several government ministries, scientists, technicians, and representatives from foreign trade organizations through which business is conducted visited the U.S. pavilion. Six new-to-market and eight old-to-market firms participated; both new and old sold equipment on display, and expect to conclude additional business within the next 12 months. Floor sales reached $778,300; total estimated to result, $5.3 million.

A new and semi-autonomous enterprise set up to represent foreign firms in Czechoslovakia is now in operation. Called the Association of Firms for Foreign Agencies and of Agency Organizations in Czechoslovakia, it links 11 agencies which, in turn, represent various industrial groups. The effectiveness of this new unit is still being evaluated, according to businessmen active in Czechoslovakian commercial circles.

Telecommunications Show Set For Moscow In April

A telecommunications equipment exhibition, sponsored by the USSR Chamber of Commerce and Industry, is to be held at Sokolniki Park in Moscow April 5-15. Manufacturers from all corners of the globe are expected to display their products—from the simplest to the most sophisticated—during this biennial event, SVJAZ-77. For additional information, write: O.K. Machine & Tool Corp., 3455 Conner St., Bronx, N.Y. 10475; phone, 212-994-6600.

Venezuelan Gains Spur Food Processing Market, U.S. Exhibitors Benefit

The phenomenal increase in foreign exchange earnings from petroleum and the development-minded government have given the Venezuelan economy a push that is making it one of the world's most dynamic markets. U.S. participants in the recent U.S. Food Processing and Packaging Machinery Exhibition in Caracas confirmed that the Venezuelan food and beverage processing industry is one of the major industries benefiting from the country's economic expansion.

All 40 U.S. companies represented in the exhibition concluded off-the-floor sales—amounting to a total of $1.6 million. Exhibitors project for the next 12 months another $8.3 million in sales as a direct result of their exposure to local buyers. Seventy six "candidates" vied for eight agent/distributor contracts sought by the exhibitors. Special-flooring, modular freezer plants, food processing plants, meat cutters and bone trimmers, ice cream machines, automatic wrapping and weighing machines, and steam generators were among the U.S. firms' products.

For the past several years, growth of the Venezuelan food and beverage processing industries has significantly exceeded that of the gross national product and of manufacturing in general. In view of Venezuela's rapidly increasing population and improving standard of living, this industry will continue to expand with a definite trend toward further mechanization and automation. In 1975, Venezuelan imports of food processing and packaging equipment amounted to $113 million. A 10 percent growth rate is expected during the next five years and the U.S. share of the market will exceed the current 50 percent level.

The recent exhibition was part of a special "Sell in Venezuela" campaign being sponsored by the U.S. Department of Commerce. Six additional shows in this promotional effort will focus on displays of process controls, metalworking, telecommunications, energy, graphics and printing, and plastics production equipment, all to be held at the new U.S. exhibition facility, beginning in April 1977 and extending into the fall of 1978.

PACKAGING IN CARACAS—*George Fischbein (right) of Fischbein International demonstrates his firm's bag-closing machine to visitors during U.S. solo exhibition.*

CANADA GROWS MODESTLY AFTER YEAR OF RESTRAINT; IMPORTS FROM U.S. RISE

Canada's economic recovery, which began about mid-1975, has been modest by historical standards, reports the U.S. Embassy in Ottawa.

Real GNP growth jumped by 2.7 percent in the first quarter of 1976 but dropped to zero growth in the second quarter, and there was sluggishness in the manufacturing and mining sectors. Real final domestic demand—gross national expenditure plus imports minus exports—increased in the second quarter; however, corporate profits were relatively static, unemployment was high, and capacity utilization was low, thus providing little incentive for increases in fixed capital expansion. Most forecasters expect real GNP growth to register about 5 percent for the full year.

The federal government's anti-inflation program of income and profit controls, government spending restraint, and agreements for federal jurisdiction over certain provincial economic segments has been in existence for about a year and produced some signs of success. In August the Consumer Price Index registered its lowest year-over-year increase in three years, and the government was expected to reach if not better its target of no more than an 8 percent rise for 1976. The average rate of increase negotiated in major collective bargaining agreements has been significantly reduced from 16.9 percent for all of last year to 11.5 percent in the second quarter of 1976, and the Anti-Inflation Board (A.I.B.), which has rolled back increases from an average 14.5 percent to 12.1 percent in the nearly 2,000 cases it has reviewed, took credit for the reduced wage settlements.

Thus, some economists are saying that inflation rates are being brought under control and that the economic recovery, although slow by historical standards, is continuing.

Critics of the anti-inflation program claim that lower food prices, over which the Anti-Inflation Board has little control, were mainly responsible for the reduced rate of increase in the CPI, and business criticism of the program has intensified over new profit restrictions. Organized labor, opposed to the control program from the beginning, maintains that the program holds down wage but not price increases and damages the collective bargaining process, whereas business contends that the profit restraints inhibit investment and job creation. The Canadian Labour Congress held a "national day of protest" on Oct. 14, and at least one of the provinces threatened to withdraw from the federal program next March.

The Index of Industrial Production fell in June, dropped below the March level in July, and though it rose slightly in August, remained below the May level. Total fixed investment increased only 0.9 percent in real terms in the second quarter, and business real investment in non-residential construction fell 0.9 percent in the same period. The merchandise trade balance improved, but growing deficits in service payments, largely as a result of huge overseas borrowings, kept the current account deficit at record levels. New housing starts began to slip in mid-year, and direct foreign investment was down considerably.

The large spread between U.S. and Canadian interest rates has fostered record placement of Canadian bond issues abroad. Canadian net issues abroad were over C$4.8 billion for the first six months of 1976 as opposed to $5.2 billion for all of 1975. The conversion of these overseas borrowings has kept upward pressure on the Canadian dollar, and in September the Canadian dollar was trading at about a 3-cent premium to the U.S. dollar. The Bank of Canada's tighter money policy announced in August has helped to keep Canadian interest rates high.

At its biennial convention the Canadian Labor Congress Executive was not only given unprecedented power to call a national day of protest but was also authorized to seek a fundamental restructuring of Canadian institutions in the form of tripartite power sharing between government, business and labor on major economic and social issues. The government has held preliminary discussions on a tripartite consultative forum with labor and business but, given the divergent views, no early agreement on form and substance is likely to emerge.

The apparent futility of calling strikes under conditions where the Anti-Inflation Board is the final arbiter on monetary matters has not resulted in any lessening of industrial conflicts. In the first five months of this year 3,338,620 days were lost due to work stoppages, some over non-wage issues.

Banks, brokerage houses and research organizations are predicting real GNP growth of about 5 percent for all of 1976, dropping to slightly less than 5 percent for 1977. Real business capital formation is expected to remain static, and residential construction will probably decline from the high levels of late 1975 and early 1976.

The unemployment level will likely rise to 7.5 percent unless the federal government decides to stimulate the economy. Most forecasters believe the Canadian dollar exchange level should drop before the end of the year or early in 1977 to par with the U.S. dollar, but few are willing to say precisely when.

The rise in the CPI will probably be under 8 percent for 1976, but it is difficult to see how the target of 6 percent for 1977 can be reached with expected higher energy and food costs, wage settlements running above the A.I.B.'s own guidelines, and no drop yet in the Wholesale Price Index. Government economists are still pinning their hopes on recovery in the United States to stimulate the Canadian upturn.

Canadian figures on direct investment flows north and south of the border for the first six months show a net outflow of U.S. direct investment from Canada of C$43 million. Although Canadian direct investment in the United States was reported to be only $26 million for the same period, U.S. Consulates General report much greater interest on the part of Canadian business seeking investment opportunities in the States. Business officials cite lower increases in wages, less strike activity, and a lower rate of inflation in the United States, fears of continuing controls in Canada,

ACROSS THE BORDER—*The accompanying article reports a net outflow of U.S. direct investment from Canada during the first half of 1976. Pictured is the Ford plant at Oakville, Ontario.*

and the unfavorable exchange rate as principal reasons for their looking to the United States for possibilities of expanding operations.

On a Canadian customs basis, total Canadian exports for the January to August period increased in value 16.9 percent over the same period in 1975, to a total of C$24,739.7 million. Exports to the United States of C$16,789.0 million were 21.7 percent above the 1975 level for the period. The U.S. share of Canadian exports rose from 65.2 percent during this period in 1975 to 67.9 percent for 1976.

Natural gas deliveries to the United States rose $425.8 million over 1975 figures (an increase of 67.3 percent) due to substantial export price increases, and automotive exports to all countries (90 percent of this total went to the United States) rose $2,047.0 million, an increase of 58.4 percent over the January-August period in 1975.

Also advancing strongly

Shipments of forestry products, ores and metals also registered strong advances. Forestry products rose from $2,191.9 million to $3,723.4 million, a 69.9 percent gain. Metal ores, concentrates and scrap shipments increased dramatically from $386.9 million to $1,594.4 million. Even more impressive was the increase in value of wheat shipments—$5.9 million to $1,213.0 million.

On the import side, Canada's global purchases during January-August increased $2,267.6 million to a total of $25,043.3 million, a 9.9 percent gain. Imports from the United States were valued at $17,033.3 million, gaining 10 percent over the previous period, and accounted for 68.0 percent of Canada's total imports, a 1.4 percentage point increase in the United States share over the previous year.

Contrasting with increased imports from the United States, Canadian foreign purchases from other sources declined, with the major factor being a drop in purchases from the EEC (including the United Kingdom) from $2,189.5 million in January-August 1975 to $2,113.4 million for the same period in 1976.

Automotive products, machinery and equipment contributed to the rise in imports from the United States. Automotive imports, mostly from the United States, increased $1,048.8 million, a 20.9 percent gain. Automotive imports from the EEC, however, declined slightly during this period.

In August the government released a White Paper on proposed changes in the Bank Act, which will expire on June 30, 1977, including allowing foreign banks to become chartered banks, setting up a new nationwide payments system, permitting banks to do leasing and factoring, and giving greater discretionary powers to the Finance Minister in regulating banking activity. General reaction to the White Paper, which calls for increased banking competition and efficiency, has been favorable, although questions have been raised about proposed limitations on foreign banks' size and regarding new reserve requirements.

Thirty of the approximately 60 foreign banks now engaged in some form of financial activity in Canada are U.S. banks, and presumably they could become chartered banks under the proposed revisions. The U.S. Embassy in Ottawa would be pleased to discuss the Bank Act changes with representatives of U.S. banks not now operating in Canada.

Balance of payment figures for the first half of 1976 show relatively little direct foreign investment flows to Canada during the period, only C$50 million as opposed to C$371 million in the comparable period last year. Canadian direct investment abroad was also down, C$220 million versus $366 million, but increases in the second quarter brought the average quarterly level near the levels for 1974 and 1975.

Phase II of the Foreign Investment Review Act, pertaining to the establishment of new business, has now been operating for a year, and decisions under the section, as with previous takeover screenings, appeared to be nondiscriminatory as to nationality of the investor.

The U.S. Consulates General in Montreal and Toronto report greatly increased interest by Canadian business in investment opportunities in the United States. State investment authorities in Pennsylvania, Michigan and Tennessee are capitalizing on this interest by sending investment teams. Other state investment groups might consider organizing similar delegates to visit major Canadian cities to explore joint venture and/or wholly-owned operations in the States with Canadian companies.

Despite the uncertain pace of general economic activity, the U.S. Consulates General across Canada continue to report some attractive trade prospects in the various regional markets. In Ontario there appear to be possibilities for U.S. manufacturers of consumer durables whose production cost advantage and/or novelty overcome duty, tax and transportation factors. Markets should also be good for add-ons and attachments for existing machinery, if the products increase output or diversify functions. Energy-saving and pollution-control equipment is also believed to have a continuing market potential in Ontario, but equipment should be novel.

Commercial products having the best prospects in Atlantic Canada include the following: equipment for the coal mining industry; farm equipment, especially for root crops; equipment for the logging and lumbering industry; and fishing industry equipment.

High demand in Quebec

In Quebec, textiles, mill products, apparel and other textile products continue to offer comparative advantages to U.S. exporters. It should be noted, however, that there is strong domestic pressure for protection in this industry. Demand remains high in this province for U.S. construction equipment and supplies, builders' hardware, housewares, home decoration products and maintenance products. U.S. exporters could also find possibilities for process control instrumentation equipment, motors, generators, measuring, monitoring and controlling devices, and for miscellaneous fabricated metal products. Interest is also expected to continue high in educational and training consumables, giftware and premiums for advertising and promotional use.

In British Columbia the emphasis on capital investment has changed from spending on expansion to repair and modernization, and U.S. equipment may have sales opportunities. The increase in new housing starts in the province should also provide some opportunity for U.S. exporters of consumer durables.

Alberta provides a rapidly growing market for U.S. goods and services and in general is very receptive to new foreign investment. Areas which appear to have particularly good potential for U.S. suppliers are earthmoving equipment, environmental testing devices, process control instrumentation, transportation equipment, and pipeline materials.

Reconciled Trade Figures

The United States-Canada Trade Statistics Committee has completed the reconciliation of the two countries' merchandise trade statistics for 1975. The reconciled estimate of the U.S. merchandise trade surplus vis-a-vis Canada for the year was $1.3 billion.

Because of differences in concepts and collection procedures, official figures published by Canada had put the U.S. surplus at $1.9 billion while the figures on trade with Canada published by the United States (based on Customs valuation) showed a U.S. deficit of $0.4 billion (on an f.a.s. value basis the U.S. figures reflected a nominal surplus of $15 million). The reconciled figures are based on a conceptual framework approximating balance of payments principles. This framework provides a means to circumvent differences in concepts and collection procedures used in the official trade statistics of the two countries.

AID BRACES PAKISTAN, EXPANDS OPPORTUNITIES

Pakistan's economy has performed better in the past year than in the preceding period, reports the U.S. Embassy in Islamabad, with real GNP up 5 percent.

The wheat crop is substantially larger than the previous record, and inflation roughly half of the previous level. The economy continues to suffer from lack of growth in the industrial sector and from a substantial trade gap. The outlook for the next few years is for a continuing difficult balance of payments situation. The government hopes for further substantial increases in agricultural production, and industrial investment plans now under way should result in substantial increases in capacity in key public sector industries by FY78.

Investment in the public sector continues to increase sharply. The government's announcement nationalizing several agricultural processing industries last July, however, further depressed the already cautious private investment climate and has left Pakistani entrepreneurs with serious questions about what role the government envisages for the private sector in its mixed economy.

A few U.S. firms already in the Pakistan market are expanding. One major investment by a U.S. company in the fertilizer area, supported by World Bank, German and U.S. AID financing, is in an advanced planning stage. In general, however, little new investment activity by American firms is taking place in Pakistan. Petroleum exploration activity by American and other foreign companies is moving slowly. There has been some generalized interest in locating assembly or manufacturing plants in Pakistan, principally to supply neighboring oil countries, but little or no actual movement towards establishing such enterprises is evident.

The best prospects for U.S. exporters to Pakistan are in the areas of equipment for chemical fertilizers, telecommunications, ports, hotels, heavy construction and food processing (such as sugar mills, edible oil processing and wheat and rice milling equipment). Engineering and consulting services will also be needed in connection with development projects.

Foreign aid accounts for a great deal of the investment planned in Pakistan over the next few years. U.S. AID has authorized loans to support a malaria control program and for a fertilizer plant in which the Agrico Corporation will be an equity partner. Substantial AID loans for agricultural investments will finance primarily imports of phosphatic fertilizer and improved seeds. An initial $40 million loan of this sort has been almost fully drawn but others are expected shortly.

U.S. AID has also authorized a technical services loan which will finance economic and engineering feasibility studies and consulting by American and other eligible firms for possible projects proposed by the Government of Pakistan. The follow-on projects are not likely to receive AID financing, however. All the other activities by U.S. AID are focused on areas which will directly benefit the poorest segments of Pakistan's population. Agriculture, rural primary education, population planning and health are major beneficiary sectors.

The World Bank Group has authorized loans for expansion of the natural gas pipeline system of Sui Northern Gas, a fertilizer plant, two development banks, livestock development, improved seed production, electric power and major improvements in the Lahore water supply and drainage system. The Asian Development Bank (ADB) is also active in the fertilizer field, with loans to the Multan and Mirpur Mathelo fertilizer plants. In what is becoming a familiar pattern, both of these projects include some financing from OPEC sources. The ADB has also authorized loans of $22 million for the installation of gas turbines for the Karachi Electric Corporation, and $25 million for the Industrial Development Bank of Pakistan for relending to the private sector. Other loans planned or under consideration by ADB include assistance to the Lyallpur and Hyderabad water supply schemes, and for dredging operations at new Port Qasim near Karachi.

Projects to be financed by OPEC aid and joint ventures with OPEC country participation include an oil refinery, several textile plants, at least two livestock projects, a cement plant, and a polyester fiber plant. Some of the equipment for these projects will come from the United States.

Because of Pakistan's difficult balance of payments situation and high debt service, a crucial element in most export sales is financing. For imports not financed by foreign assistance, the government makes prospective importers, both public and private sector, look carefully at financing terms, and suppliers who cannot offer some form of credit may find themselves at a disadvantage even if their price is competitive.

CHANGES IN BANGLADESH GET ECONOMY ON TRACK

Considerable political change, significantly more liberal economic policy decisions and an improved business climate have developed in Bangladesh over the past year, according to Donald W. Born, Economic/Commercial Counselor at the U.S. Embassy in Dacca.

The violent political coups in late 1975 brought to office an interim martial law government, in which the three military service chiefs play a dominant role, but which is committed to the rule of law and a restoration of democratic procedures.

Important economic policy decisions, designed to curb inflation, increase production, and make more efficient use of limited resources, have been taken. These began with a credit squeeze, devaluation and liberalized import policies in 1975. Since last November, the government has shown a greater willingness than its predecessors to rely on the private sector. The investment climate has improved and numerous import procedures relaxed, easing the process of trading with Bangladesh.

Combined with excellent agricultural harvests due to good weather, these changes have halted inflation, increased supplies, and, despite an annual population growth rate of nearly 3 percent, raised per capita living standards, if only to their very low pre-independence level.

However, the massive, long-term economic problems which this less-developed country faces remain unsolved, and most observers do not expect these fundamental difficulties to be overcome soon.

The government liberalized its investment policy in December and continues to indicate a genuine desire to attract foreign private capital. The broad features of the revised policy include an increase in the investment ceiling from $2 million to $6.6 million (100 million taka) and opening up of virtually all economic sectors to private investment. Even in those few remaining areas reserved to the government, private investors may enter into joint ventures as minority partners. In addition, the government has begun compensating owners of properties nationalized in 1972 and divesting itself, by sale to private buyers, of other properties.

The government has also adopted a large number of measures to liberalize import procedures and to free internal trade. In addition, it has placed a greatly increased emphasis on expanding exports. The role of the private sector has been enlarged in these areas.

Imports of essential commodities continue, of necessity, to receive priority allocation of Bangladesh's scarce foreign exchange. (Non-project, non-foodgrain imports are to amount to about $750 million in the year ending June 1977.) Since export earnings amount to only one-third of the total import bill, such essentials are largely financed by foreign assistance. Apart from foodgrains, these include many commodities and products where American exporters are competitive, such as raw cotton, inedible tallow

and edible oil. These imports are generally financed by multilateral donors, or bilaterally under PL-480. Other commodities regularly imported include drugs and medicines, machinery and spare parts, water pumps and equipment for specific donor-financed projects.

The government makes most of its purchases by international tender. The more important tenders are published in *Commerce America*. A good local agent can also keep U.S. firms abreast of tender opportunities.

Despite its heavy dependence on foreign assistance, which observers believe will continue for many years, Bangladesh has recently increased the share of imports handled by the private sector and liberalized the procedures involved. Only one commodity is now handled exclusively by the public sector Trading Corporation of Bangladesh (TCB), which once handled the majority of imports, and the private sector gets the larger portion of available funds. A recent reduction in licensed importers has meant that an established local importer/agent can now handle a relatively larger volume of goods than heretofore. Also, the allowable minimum size of orders has been increased (to $660), reducing overhead costs on individual orders.

Another area where the government's liberal policies offer U.S. exporters potential trade opportunities is the Wage Earners' scheme, which brings in some $40 million worth of goods to Bangladesh annually. Bangladeshis earning or holding funds abroad may remit goods to Bangladesh for sale without price controls. This gives the remitter a higher return in local currency than the official exchange rate would bring. The list of goods which may be imported under this scheme has been continually expanded and now includes such durable consumer goods as airconditioners and small cars.

Despite these significant recent improvements, import licensing requirements and restrictions generally are expected to remain in effect for the foreseeable future.

Most internal price and distribution controls, for example those on cotton textiles, have been gradually removed over the past 18 months, while the private sector has been allowed a greater role in exporting both traditional items, i.e., jute goods, and non-traditional items, such as handicrafts.

The massive economic development problems facing overcrowded, poor Bangladesh with its limited natural resources are expected to constrain imports and require foreign assistance for many years. Nevertheless, the outlook is for continuing generous aid flows to this less-developed nation and modest but continuing trade opportunities for U.S. exporters.

THAILAND IS DOING WELL; NEW PLAN IS READIED

By most indicators of economic health Thailand is doing very well, reports the U.S. Embassy in Bangkok.

The country is sharing in the general recovery in the world economy. The crucial foreign trade factor is leading the recovery in Thailand, with exports up over 30 percent in the first half of the year. Imports, however, moved ahead only slightly, reflecting the low level of demand for new capital equipment. This is evidence of the cutback in new investment, both Thai and foreign.

While economic conditions are favorable to a revival of investment, the political climate has not been conducive to building public confidence. The government has taken some constructive steps in the economic field but the business community generally is dissatisfied with the slow pace of the government's decision-making process. Much less is now heard about the threat from external aggression or internal insurgency than in the period just after the communist takeover of neighboring countries, but it is still a source of concern for some.

Thailand's Fourth Economic and Social Development Plan covers the period from 1977 to 1981. The country's basically free enterprise economy and democratic government dictate that national planning cannot be the controlling force which it is in communist or socialist states. Planning is largely indicative, setting forth the government's priorities and programs and providing the setting for influencing the direction of private sector activities.

The general thrust of the plan, still not released in final form, is aimed at improved agricultural productivity, greater and more diversified export-oriented industry, a further decline in the rate of population growth and greater attention to employment creation and improved income distribution. The new government elected in April is committed to improving incomes and services in the rural areas and will make it a priority objective of the upcoming Five-Year Plan.

Some of the best investment and sales opportunities for American companies in Thailand continue to be in the agribusiness sector. With emphasis being placed by the government on raising rural incomes and employment and on developing the economy in the countryside, sales prospects look particularly attractive for exporters of agricultural and food processing machinery and equipment, as well as a wide variety of products and services needed for planned development of the rural economy.

As noted above, Thailand's Fourth Five-Year Plan will include rural development among its priority objectives, with the government expecting to allocate considerable sums for such things as irrigation projects, expansion of power generation and transmission facilities, rural electrification, regional airport expansion and port improvement projects, country-wide expansion of telephone facilities, and the like.

Equipment to complete such projects as these will be needed, as well as construction equipment and consulting services. Continued development and extraction of the country's mineral resources will create increasing demand for mining equipment.

Until the political climate improves and confidence is restored, an early surge of new investment, whether domestic or foreign, does not seem likely, although opportunities do exist. However, the current upswing in what is basically an extremely sound economy should soon necessitate expansion of existing local investment and replenishment of inventories.

There are other opportunities as well for American exporters, not directly related to rural development or construction. There are expanding markets for a wide range of consumer goods, mainly in the Bangkok metropolis, as well as for office equipment, scientific instruments, printing and graphic arts materials, and hospital and medical equipment. American exports to Thailand have continued to increase over the past several years, and there is every reason to believe that this trend will continue.

Thailand is not yet ready for the most sophisticated of equipment, but it is clearly moving steadily in that direction and U.S. companies which have developed relations with local agents and the local market will be in the best position to benefit when that time comes.

ITALY REINSTATES SURTAX

The Italian Government announced, effective Oct. 25, the reintroduction of a surtax on virtually all purchases of foreign exchange. The surtax is similar to the measure that expired on Oct. 18, but has been reduced from 10 to 7 percent. This new measure will be in effect for a maximum of four months, with the possibility of a reduction of the rate or elimination of the tax before the maximum time if economic conditions permit.

The following exchange transactions are among those exempt from the surtax: imports of wheat (BTN No. 10.01); imports of daily newspapers and periodicals; imports of artificial kidneys; imports of blood-derived products; foreign disinvestments and net income from foreign investments in Italy; purchases abroad of supplies for Italian ships and aircrafts; and remittances of savings from wages and salaried income of temporary residents in Italy.

ANCOM: CHILE WITHDRAWS, FIVE EASE RESTRICTIONS

Chile withdrew formally from the Andean Common Market (ANCOM) on Oct. 30 after a failure to reach agreement on foreign investment and import tariff issues. Unresolved differences between Chile and the other five members centered on Chile's desire to attract foreign investors under much less restrictive conditions than those acceptable to the other members, and Chile's request for relatively low import tariff levels.

In withdrawing, Chile renounced all rights and obligations, except those included in Decisions dealing with ANCOM Double Taxation (40), Regional Multinational Enterprise (46), Highway Transport (56), Andean Road Transport (94).

The remaining five members—Bolivia, Colombia, Ecuador, Peru and Venezuela—adopted measures to liberalize restrictions on foreign investments in accordance with previous recommendations made by the five in the Declaration of Bogota. Decision 103 of the Commission provided, among other things, the following modifications in Decision 24, the Andean Foreign Investment Code:

- An increase from 14 to 20 percent in profit remittance levels; higher levels may be set by individual governments;
- An increase from 5 to 7 percent in the annual permitted rate of automatic reinvestment;
- A ruling that regional investments are to be considered as "national" capital for purposes of profit remittances and capital repatriation.

In other decisions, the Andean Commission adopted further significant measures relating to import tariffs and the assignment of industry under Sectoral Program for Industrial Development (SPID) as follows:

- Fixed the common external tariff (CXT) at a minimum of 60 percent with some higher exceptions for Bolivia and Ecuador; the average CXT is to be reduced from present 40 to 28 percent;
- Extended to December 1978 the period by the end of which a CXT schedule must be approved;
- Extended from 1985 to 1988 the deadline for completion of the entire trade liberalization program;
- Set June 30, 1977 for agreement on SPID's already under review (automotive, steel, electronic and fertilizer) and Oct. 31, 1977 for additional SPID's; concurrently, the Commission set a deadline of March 31, 1977 for approval of a special assistance program for Bolivia;
- Extended to December 1978 the period to maintain in reserve those products which might be included eventually in a SPID (products while in reserve are not subject to intra-Andean tariff cuts or the CXT).

Calendar For World Traders

Nov. 30-Dec. 1—New York—World Trade Institute seminars on Reducing Cross-Cultural Problems in Saudi Arabia, and Selling Through Foreign Procurement Programs.

Dec. 6-8—Ann Arbor—Seminar on Investing and Selling in Latin American Markets. Sponsor: University of Michigan, Graduate School of Business Administration, 313-763-1387.

Dec. 6-10—New York—American Management Associations seminar: How to Export From the United States.

Dec. 7 — Milwaukee — Export Financing Workshop, with advisors from FCIA, banks and export firms. Reservations: 414-224-3473.

Dec. 7 — New York — FCIB Roundtable Conference on International Finance, Credit, Collection and Exchange Problems, Summit Hotel.

Dec. 8—Charlotte, N.C.—Seminar on Doing Business in Venezuela, S&W Cafeteria. For information: Ms. Linder, 704-392-4116.

Dec. 9—New York—Overseas Automotive Club luncheon meeting, Summit Hotel.

Dec. 12—New York—World Trade Institute conference on Middle East. George Beck of the Commerce Action Group for the Near East will speak.

Dec. 15—Philadelphia—Seminar on Doing Business in Venezuela. For information: Thomas J. Murray, 215-597-2850.

Dec. 15—New York—FCIB Book Exporters Credit Group Christmas meeting, Summit Hotel.

Dec. 16—New York—FCIB Drug, Chemical & Food Export Club Christmas meeting, Summit Hotel.

INTERNATIONAL BUSINESS REPORTS

Principles and Techniques in Exporting. Published by the International Trade Club of Chicago. Sixth edition. $15.

The text of this practical manual on exporting procedures is used in connection with the club's annual seminar on Principles and Techniques in Exporting conducted each fall.

Write: International Trade Club of Chicago, 310 South Michigan Ave., Chicago, Ill. 60604.

The Political Economy of East-West Trade. By Connie M. Friesen. September 1976. 203pp. $18.50.

Subjects discussed include changing perspectives in U.S.-Soviet trade, COMECON and East-West trade, West European trade, infrastructure of East-West trade, East-West trade in computers, petroleum and natural gas, and chemicals, Soviet-U.S. grain trade, and effects of detente on East-West trade.

Write: Praeger Publishers, 111 Fourth Ave., New York, N.Y. 10003.

The Indonesia Letter. Monthly, 8pp., plus special report. $175 per year.

A monthly analysis of economic, political, and social developments and trends in Indonesia. Appraises personalities and bureaucracy which deal with foreign companies operating in Indonesia, and analyzes social patterns and problems affecting long-term stability. The next few years will bear close watching as to how the Indonesian leadership copes with problems like Pertamina debt servicing, elections, decline in foreign investment, growing pressures for a more equitable distribution of wealth, and the unique challenges facing foreign companies doing business there. Features regular reports on the current status of these and other areas of concern.

Write: W. G. Douglas, The Indonesia Letter, P.O. Box 54149, Los Angeles, Calif. 90054.

U.S.-Soviet Trade Is Topic

Commerce's Bureau of East-West Trade recently published **American-Soviet Trade: A Joint Seminar on the Organizational and Legal Aspects,** a compendium of presentations made by Soviet and American delegations at a seminar in Moscow last December.

The eight USSR papers discuss regulation of exports and imports in the Soviet Union, organizations involved in industrial cooperation, the legal status of Soviet foreign trade organizations, credit and finance in USSR foreign trade, and problems in Soviet-American commercial contracts. The U.S. presentations include reports on customs and tariffs, market disruption, export controls, labeling requirements, and financing regulations.

Further information and copies of this publication may be obtained by calling 202-377-4655 or by writing: USSR Affairs Division, Bureau of East-West Trade, Room 4323, U.S. Department of Commerce, Washington, D.C. 20230.

Worldwide Business Opportunities

International trade specialists in the Department of Commerce and Foreign Service Officers in the U.S. Embassies and Consulates around the world are continually developing specific commercial opportunities through which American companies can find buyers, agents, partners or investors abroad. One of the major means for communicating these opportunities promptly and accurately to the U.S. business community is through the columns of this magazine.

The section that follows presents details about licensing and joint venture proposals, opportunities to sell to foreign enterprises and appoint agents, visits by foreign buyers and officials, and major construction and expansion projects.

Licensing, Investment Abroad

1500, 1600, 8911—AUSTRALIA—Firm desires joint venture with U.S. company active in **construction and/or engineering.** Established 1947, company has 70 employees; offices in New South Wales, Queensland, Papua New Guinea. Areas in which company has undertaken projects include steelworks, power stations, coal handlers, timber mills, sugar mills, palm and oil plants. Overseas Products & Investment Opportunities Staff, Room 4021, U.S. Department of Commerce, Washington, D.C. 20230. P-76912.

1500—NIGERIA — Recently established **construction firm** seeks U.S. joint venture partner to provide management and technical expertise. Additional information from Overseas Products & Investment Opportunities Staff, Room 4021, U.S. Department of Commerce, Washington, D.C. 20230. P-76911. OPIC.

2022, 2024—VENEZUELA — Manufacturer of butter seeks know-how for expansion to production of **cheeses and ice cream** and other derivatives of cream. Overseas Products and Investment Opportunities Staff, Room 4021, U.S. Department of Commerce, Washington, D.C. 20230. P-76887.

2400 — CHILE — Chilean Development Corporation is prepared to sell shares of stock in two local firms. One, Celulosa Arauco S.A., produces long fiber, bleached draft cellulose with 120,000 M.T. annual capacity. Also owns extensive forest stands in Arauco Province. Associated company, Empresa Forestal Arauco Ltda., provides raw materials and exports sawn wood. Specifications may be obtained at: CORFO, Moneda 921, Of. 822, Santiago, and cost $127.39 for each industry. Offers must be sent in duplicate and in sealed envelope, addressed to: Ministro Vice Presidente Ejecutivo de CORFO, Moneda 921, Of. 825, 8 Piso, Santiago. P-76902. OPIC.

2452, 3448—FRANCE—Seeks license to manufacture **prefabricated buildings of light materials such as wood or metal,** that are easy to ship and easy to assemble by unskilled labor. Company is engineering firm established in 1947, with 150 employees and annual volume of 16 million francs. M. Jean Jacques Walter, Secommet Cercelet Sibille, Rue Frederic Joliot, Zone Industrielle, 13290 Les Milles. P-76914.

2621, 2611—THAILAND—Firm planning to produce **newsprint and pulp** in Thailand, seeks an investor to provide $1.6 million and technology in exchange for 23 percent equity and management participation. Company was organized in 1967 with authorized capital of $7 million and plans to expand its capitalization to $14 million. Overseas Products & Investment Opportunities Staff, Room 4021, U.S. Department of Commerce, Washington, D.C. 20230. WTDR. P-76903. OPIC.

2649, 3079—AUSTRALIA — Seeks new technology through license or joint venture to **produce paper and plastic packaging and industrial materials.** Firm is most interested in advanced injection molding techniques, whether or not patented; also, innovative packaging techniques. Is well established packaging firm looking to new markets. C. G. Garnsworthy, Mgr., United Packages Ltd., Ashover Road, Rocklea, 4106, Queensland. WTDR. P-76896.

2819—ITALY—Seeks technology to produce **amorphous precipitated silica** for use as filter for rubber, pharmaceutical and agricultural chemicals industries. Established 1968, firm had 1975 sales of $2 million, mostly products exported to EEC and Eastern European countries. Manufacturers colloidal silicon compounds, water treatment chemicals, refractory powders. Andrea de Leone, Sales Mgr., Kempro Italiana S.p.A., Via Pienza 251, 00138 Rome. WTDR. P-76904.

2834—NETHERLANDS — Seeks licenses to manufacture and sell **ethical or over-the-counter pharmaceuticals and products related to pharmaceutical industry.** Firm employs 150, produces vitamin preparations, pain relievers, stomach medications. Has subsidiaries in Europe, Turkey, Mexico. R. S. Cortissos, Int'l. Mktng. Mgr., Roter Pharmaceutische Fabriek CV, P.O. Box 502, Arendstraat 3, Hilversum. P-76905.

2869, 2899—UNITED KINGDOM—Seeks technology to manufacture **foundry chemicals, synthetic resins, photographic chemicals, food aditives, synthesized pigments and inorganic salts.** Firm has 44 employees, annual sales of 1 million pounds. Produces and exports various chemicals to Europe, Australia, Africa. Is part of Green's Economiser Group Ltd., established in 1845. J. C. Leadbetter, Sales Mgr., E. Green & Son Brotherton Chemicals Ltd., Calder Vale Road, Wakefield WF1 5PF, England. P-76898.

2951, 2372, 3281—NIGERIA—Seeks technically competent American partner to develop an industrial complex for **processing asphalt, crushing stone, and production of precast concrete for roads and bridges.** Firm desires quotations on following: large asphalt processing machines, large concrete batching machines, stone crusher and compressor and quarry equipment. For further details contact Overseas Products & Investment Opportunities Staff, Room 4021, U.S. Department of Commerce, Washington, D.C. 20230. P-76919. WTDR. OPIC.

3079—GERMANY—Seeks licenses to produce and market **extruded polyethylene products (films, foils, sheets) and related equipment, for use in industrial packaging and materials handling; farming, gardening and grape growing; and camping and leisure.** Firm also offers to license its technology in these fields to U.S. companies. Established in 1828, firm is a leading West German polyethylene manufacturer with staff of 500, yearly sales of $41 million. Klaus Peter Nohr, Mktng. Dept., Polydress Plastic GmbH, Postfach 3209, D-6120 Michelstadt. Telephone, 060601-771; telex, 04191618. P-76924.

3079—GERMANY—Manufacturer of tire remolds, part of large German company, is interested in joint venture aimed at converting its plant to new line of production. Company feels ideal **basic material** would be **plastic, perhaps asbestos.** Firm has excellent distribution throughout Germany. For further information contact Ms. Doris Atkind, Trade Promotion, European-American Bank & Trust Co., 10 Hanover Sq., New York 10015; telephone, 212-437-4300. P-76917.

3079—NIGERIA — Seeks joint venture with U.S. firm to produce **PVC pressure pipes and sewage pipes.** Firm seeks financial assistance, machinery, technical know-how. Company does civil engineering contracting and building, manufactures precast concrete transmission poles. Employs 125, has a good reputation. N. M. Yacoob, Mng. Dir., Yacoob & Sons, Ltd., P.O. Box 1249, Ibadan. P-76888. OPIC.

3272—GERMANY—Seeks technology to produce **novel, prefabricated concrete building components.** Founded in 1956, company employs 50, and has annual sales of $2.4 million. Manufactures prefabricated concrete roof sections, wall panels, stairs, floors, chimneys, fence posts. Wolfram-Peter Konrad, Arthur Konrad KG, Betonwerk, Homfelderstr. 338, 3094 Bruchhausen-Vilsen. P-76899.

3272—MEXICO — Seeks technology to manufacture **prefabricated elements for irrigation systems.** Firm is small construction company, with capital of 1 million pesos. Correspondence may be in English. Ing. Rodolfo Lara Samperio, Constructora Keops, S.A., Rio Elba No. 10-201. Mexico 5, D.F. P-76889.

3275, 3296—GERMANY — Manufacturer of **acoustic materials** for construction industry, **bituminous foils with mineral (mica, asbestos) filler and stamped parts for heat and noise insulation** in various products, seeks licensing and/or reverse licensing arrangements with U.S. companies active in same field. Firm is particularly interested in production of heat insulating materials in range of −30° C. to +220° C. Also produces deadener sheets for automotive and household ap-

Licensing and investment proposals from foreign firms are listed in these columns. Specific product interests in each proposal are highlighted in bold type to facilitate identification and each proposal is preceded by the appropriate four-digit product number taken from the Standard Industrial Classification (SIC) Manual.

Background information on opportunities abroad and assistance on overseas investments are available from the Overseas Products and Investment Opportunities Staff, Room 4021, U.S. Department of Commerce, Washington, D.C. 20230. "P" numbers should be used when responding to any of the specific proposals listed.

WTDR indicates that a World Traders Data Report containing financial and background information on the foreign firm is available for $15 from the Export Information Division, Room 1313, U.S. Department of Commerce, Washington, D.C. 20230, or from any Commerce District Office.

OPIC indicates that the country involved is eligible for investment insurance coverage and financing from the Overseas Private Investment Corporation. Information regarding applicable coverage may be obtained from OPIC, Washington, D.C. 20527.

pliance manufacturing industries. Erhard Sachse, Mgr., Chemie-Werke Weinsheim GmbH, Zollhaus, 6520 Worms-Weinsheim. P-76923.

3312—CHILE—Large **tin plate container** manufacturer seeks technical assistance to improve its production needs. Company presently manufactures variety of tin plate products and containers, plain and lithographed. Also represents several firms in printing machinery, inks, etc. Huberto L. Rosenzweig, Gen. Mgr., Neumann S.A.C.I., Av. Pedro Aguirre Cerda 5445 (Cerrillos), Casilla 2135, Santiago. P-76890. OPIC.

3423, 3469—UNITED KINGDOM—Established firm presently manufacturing precision tools and hand tools, seeks licensing arrangement to manufacture **hand tools, garden tools, kitchen utensils, or other light engineering projects.** Firm has representatives in several other countries. Employs 200. Alfred Goldman, Chmn., Leytool Ltd., Leytool Works, High Road, Leyton, London E10 6RW, England. P-76900.

3443—BELGIUM—Affiliate of large West German manufacturing group is interested in licensing and/or joint venture to manufacture **metal tanks, pressure vessels, compressed air equipment and tractor and crawler undercarriages.** Firm has extensive capabilities, is open to other propositions. Is also equipped to undertake contract manufacturing or overhauling. J. Beets, n.v. Henschel Engineering, Boomsesteenweg 604-606, B-2610 Wilrijk-Antwerpen. P-76906.

3443, 3662—BELGIUM—Firm seeks licensing and/or joint venture with U.S. firm for manufacture as subcontractor of custom-made and standard **welded tanks** (in stainless steel, refractory steel) for packing injection under full line pressure. Users are petro-chemical firms, cement factories, nuclear plants, etc. Company also is interested in starting new line of manufacture in following: **radar scanners and microwave components; antennae structures and towers; parabolical antennae and transmission systems.** J. Lempereur, Industriel, Chaudronnerie de Retinne, Rue Liery 54, B-4621 Retinne. Telephone, 041 58.58.55, 58.45.26; telex, 42182. P-76907.

3500—GERMANY—Firm seeks licenses for manufacture of **sludge treatment and conditioning equipment for sludge** originating from residential and industrial waste water, and **equipment for treating organically loaded waste water,** such as micro strainers, digested sludge pasteurization plants, thickening and dewatering plants, sieves and hydrosieves, sand washing devices and presses for screenings. German company is manufacturer of equipment for water treatment and conditioning for residential and industrial waste water. Dieter-Peter Voll, Mgr., Schuler-Stengelin GmbH & Co. KG, Ober, Vorstadt 21, D-7200 Tuttlingen. Telex, 762 689; telephone, 07461-5073. WTDR. P-76921.

3530—BELGIUM—Large heavy machinery manufacturer seeks licensing arrangements to produce **complete cement plants, machines for iron ore pelleting, large gear boxes, pumps and valves (large size), other heavy machinery.** Firm is a major arm of Group SOEDMECA, which is 65% owned by Belgian Government institute SNI. Group's annual sales volume is about $60 million; employs 2,500. Firm presently makes packing presses, butt-welding machines, turbines, grinding mills, pipe making machines and wide range of industrial equipment. Albert P. Schaaps, Commercial Dir., Ateliers De Construction De La Meuse, 4200 Sclessin, Liege. Telephone: 041.52.00.30; telex, 041282. P-76913.

3530—UNITED KINGDOM—Seeks licensing agreements to manufacture **bulk solids handling and processing machines** such as dryers, mixers, sieving screens, bag opening machines or similar such equipment—could include separation and drying equipment for slurries. Presently, company makes silo discharging machines, screw conveyors, metering feeders for powders and related equipment. Has about 150 employees. Is subsidiary of Simon Engineering Ltd., which employs 10,000, has worldwide interests. R. L. Jones, Tech. Mgr., Simon-Solitec Ltd., Bristol Road, Gloucester GL2 6BY, England. P-76920.

3531—JAPAN—Firm seeks technology to manufacture **3-ton capacity hydraulic floor jacks also known as garage jacks.** Company manufactures automotive maintenance equipment, such as automobile lifts, two-post lifts, one-side lifts and wheel balancers, and material handling equipment. Employs 250. Kiyoo Fukui, Dir., Foreign Trade Dept., Sugiyasu Iron Works Co., Ltd., 8 Kamihata, Takatoricho, Takahama City, Aichi Prefecture 444-13. Telex, 4545784 SUGYA; phone 0566-53-1126. P-76891.

3536, 3531, 3714—INDONESIA—Large government-owned metal-working and engineering company is interested in joint venture or licensing arrangement to produce **crawler tractors, bulldozers, transportation cranes, wheel loaders.** Company produces road rollers, rock crushers, fluid tanks, etc. Has foundries in Surabaya and Jakarta, is currently building another in Gresik, East Java. Is also interested in receiving proposals for manufacture of **automotive equipment and spare parts.** Colonel I. Suseno, Pres. P. T. Barata Metalworks & Engineering, Jalan Ngagel 109, Surabaya. P-76892. OPIC.

3551—GERMANY—Seeks technology to manufacture **machinery and equipment used in breweries, chemical plants and fruit processing plants.** All types will be considered. Firm was founded in 1919, has 180 employees, annual sales of $5.3 million. Mrs. Peckelhoff, Hans Kock-Hakolb-Werke, Falkenstr. 31-35, 24 Luebeck 1. Telephone, 0451/41171; telex, 026821. P-76909.

3551—UNITED KINGDOM—Manufacturer of wrapping, bottling, labeling and cartoning machinery seeks licenses to produce any type of **packaging equipment.** Firm employs 600. N. H. Clark, GEI Packaging Machinery Ltd., 81 High St., Marlow SL7 1AB, England. P-76916.

3567—SPAIN—Established firm, engaged in manufacture of industrial furnaces, frequency induction furnaces and boilers, seeks licensing arrangement to manufacture **furnaces for process of melting-by-induction.** For further information, contact Ms. Doris Atkind, Trade Promotion, European-American Bank & Trust Co., 10 Hanover Sq., New York 10015; telephone, 212-437-4300. P-76918.

3569—FRANCE—Seeks license to manufacture and market **industrial paper shredding machines.** According to French concern, there is strong demand for this equipment among its customers. Presently, firm makes industrial machinery, employs 32. Thierry Chavanon, Commercial Engineer, Ateliers Mecaniques R.V., 46 Rue de Bronzac, 94240-L'Hay-Les-Roses. P-76893.

3569—GERMANY—Production facilities of company in receivership are for sale. Modern, well equipped plant has direct connections to German Federal Railroad System. Rechtsanwalt Dr. Volker Grub, Herdweg 74/1, D-7000 Stuttgart 1. Telephone: 0711/221414. Brochures (in German) describing operations of Maschinenfabrik Ludwigsburg are available from Overseas Products & Investment Opportunities Staff, Room 4021, U.S. Department of Commerce, Washington, D.C. 20230. P-76910.

3589—MEXICO—Local business consultant seeks license or joint venture to produce **microwave ovens.** He believes there is substantial domestic market for such ovens. Seeks technical know-how in return for fixed fee. Ing. Max Blok, Av. Cuauh Emoc 560-105, Colonia Narvar E., Mexico 12 D F Telephone: 905 519-6964, 519-5178. P-76915.

3600—GERMANY—Seeks licensing agreements for manufacture of **machines for electrical and electronic industry; automobile industry; packaging industry; defense techniques (NATO),** including controls, electric pneumatic, hydraulic or mechanical. Firm is noted manufacturer of various machinery and attachments and maintains efficient development department specialized to meet customer desires. Klaus von Zeppelin, Mgr., Hermann Kneissler KG, Saenger Str. 24, P.O.B. 229, D-7230 Schramberg/Schwarzwald. Telex, 0700820; telephone, 07422/6066/67. WTDR. P-76922.

3651—HUNGARY—Manufacturer of loudspeakers and Hi Fi equipment seeks license to manufacture **horn-type loudspeakers** with either pressure chamber or pneumatic driver for speech-transmission in the 300 Hz to 3400 Hz frequency range, with power handling ca-

pacities of 100 w. to 10 kw. Full technical documentation, description of technology, drawings of jigs and dies used in production, are also needed. A. Geszti, Project Mgr., LICENCIA, P.O. Box 207, 1368 Budapest. Telex, 225872. P-76901.

3728, 3599—BELGIUM—Small firm seeks licensing and/or joint venture arrangement to produce **fabricated aluminum and metal parts.** Company presently manufactures aluminum window frames for trains, trucks and buses, and also seats for mass transit facilities. Jacques Pecriaux, Administrateur Delegue, Widney Europe S.A., Rue de Sotriamont 2, 1400 Nivelles. Telephone, 067. 22. 20.76; telex, 57423. P-76897.

7391, 7392—FRANCE—Consulting firm specializing in **contracting research and development programs** for private firms and Government of France agencies is interested in establishing contacts with similar U.S. firms. Firm has experience in electronics, electrical apparatus, electric motors, energy transmission and food products. Ferdy Mayer, Pres., Laboratoire d'Electronique et d'Automatique Dauphinois (LEAD), 18, rue Thiers, 38000 Grenoble. P-76894.

7393—CANADA—Small, privately owned company supplying all forms of **security in airline, industrial and diplomatic fields,** is looking to large expansion in Canada. Firm seeks investment by way of stock acquisition or merger with U.S. company operating in similar field. Established 1973, company has 80 employees. T. A. Pickup, Pres., A.I.D. Security Canada, Ltd., 223 McLeod St., Ottawa, Ontario K2P 0Z8. P-76895.

Licensing In U.S.

For additional information on these opportunities to manufacture foreign firms' products in the United States under a licensing agreement or in partnership, write the Domestic Investment Services Staff, Bureau of International Commerce, Room 4020, U.S. Department of Commerce, Washington, D.C. 20230 (202-377-5361), referring to the appropriate file number.

FRANCE — Marseille company is interested in joint venture with U.S. firm for manufacture in U.S. of Guille line of high-quality **socks, stockings, knitted sweaters, jackets, shirts, T-shirts, swimming suits for children** (up to 18 years). U.S. Patent No. 3663272 on "sockers" (sock with soie). File 3169.

FRANCE—Large Lyon company is seeking U.S. license/joint venture partner to produce in U.S. its **seamless gas cylinders and containers.** Company reports excellent penetration of European market and has gained strong foothold in some developing countries; claims its technology surpasses standard welding techniques. File 3170.

GERMANY—Karlsruhe-Durlach company seeks American licensee for production in U.S. of its **revolving parking system.** This turntable system offers space for 24 automobiles as compared to 14 in conventional parking lots of same area. File 3171.

GERMANY—Duesseldorf company wants to locate U.S. licensee for manufacture in U.S. of all-weather **protective shelters (tents)** for construction industry. Firm's product is reported to be of high quality material with complete transparency, is easily and rapidly assembled and provides hermetically closed sphere. U.S. Patent No. 3805816. File 3172.

GERMANY—Well reputed Stuttgart firm offers its **dry-operating compressor** TV 7000 G for industrial and agriculture application. Firm, engaged in development, manufacture and distribution of pumps, compressors, and agricultural machines, seeks U.S. licensee and is open to negotiations on terms. File 3173.

GERMANY—Frankfurt firm seeks U.S. licensee for its **freeze dryers, magnetic stirrers for large vessels, automatic dilution apparatus, and light thermostats** for chemical and pharmaceutical industries and laboratories. File 3174.

GERMANY—Duesseldorf firm seeks potential U.S. licensee for manufacture of its multi-variable **air-conditioning installations** consisting of two units for schools, administrative and other public and commercial buildings. File 3175.

GERMANY—Hamburg manufacturer is seeking U.S. **bottler and marketeer** to join with him on licensing or franchising basis to sell Kola drink. File 3176.

GERMANY—Weisbaden-Erbenheim manufacturer wants cross-licensing for manufacture and distribution of **numerical controls for machine tools.** File 3177.

GERMANY—Stuttgart company offers for production under license in U.S. its newly developed unbreakable **plastic containers used in mailings,** especially those in which container will eventually be returned to sender. Many varieties. File 3178.

SWEDEN—Goteborg inventor offers for manufacture in U.S. his **plastic Christmas tree holder,** featuring device that locks or releases tree trunk through pedal operation. Patent pending. File 3179.

SWEDEN—Huddinge company seeks U.S. firm to manufacture under license and distribute in U.S. its **demountable bed system** for use in hospitals. System with beds of simple design, compact, light weight, permits rational tidying-up work in sickroom. File 3180.

SWITZERLAND—Zurich company offers for manufacture in U.S.: (1) **fiberglass die** (punching or cutting tool) (SIC 3423/3079)—body of fiberglass-resin, patent pending; (2) **tool (die) of concrete** for cutting by heat of thermoplastic foil, plexiglass, hard PVC plates, polyurethane foam, and some foam rubber, patent pending; (3) **polyester-resin,** reinforced with fiberglass sign-making process that can be an innovation in manufacture of traffic signs and licenses for automobiles, as well as advertising signs. File 3181.

SWITZERLAND—Businessman in Zurich is offering (1) **process for manufacture of railroad ties through re-cycling of used automobile tires**—ties, reportedly noise-absorbent and elastic, have been tested with good results; and (2) improved **system for fixing and adjusting rails on railroad ties.** Screws and fixtures can be manufactured in either hot rolled or drop forged process. Invention won award at Geneva inventors' fair. File 3182.

SWITZERLAND—Luzern manufacturer is seeking U.S. licensee to produce in U.S. the Swiss firm's **filling, sealing and sterilization equipment.** Is used in filling and sealing plastic yogurt cups and other dairy products; can be used with liquids, viscous and powderous materials, pastes. File 3183.

SWITZERLAND—Zurich inventor is offering for manufacture in U.S. his **lamp ballast for gas discharge lamps.** Advantages claimed are higher power, greater efficiency, and increased operational time as well as considerable reduction or elimination of stroboscopic fluctuation of luminous flux in gas discharge to reduce eye-fatigue. File 3184.

Large Hungarian Firm Seeks Partners In Third Markets

A large Hungarian company in the construction industry seeks cooperating partners for executing in third markets the mounting, construction and other tasks in investment projects of the chemical industry, oil industry, natural gas processing industry, petrochemical industry, power plant construction, pharmaceutical and food industries. The Hungarian partner would undertake the following tasks: structural and civil engineering, bridges, interconnecting roads, railway tracks, mounting at site of steel constructions, installation work; prefabrication and assembling at site of technological ducts, and equipment such as tanks, water treatment equipment, manufacture galvanization or other surface treatment of steel structures, heat insulation, fitting, electrical mounting and instrumentation; manufacture of equipment, such as heat exchangers, water treatment equipment, tanks, silos, mixers, chippers and equipment for the oil industry. In connection with the above activity the Hungarian partner would readily accept the cooperating partner's new technologies, methods, systems and machinery, especially in the mounting of steel structures, the manufacture of concrete, cradling and scaffolding. Contact Gy Gonda, Intercooperation Co., Ltd., P.O. Box 53, H-1253 Budapest 1.

Rhine-Rhone Canal Planned

The Compagnie Nationale du Rhone (CNR) is going ahead with plans to develop a 230 km.-canal connecting the Rhone and Rhine rivers. CNR, a French government entity controlled by municipalities along the Rhone and Paris, has been designated as general contractor for this $1.5-billion project. Construction of the canal, with 24 locks and designed to accommodate barges of 4,000-5,000 tons, is expected to take seven to ten years. The project has received French Government approval, subject to "a survey of ultimate public benefit," and acquisition of land should be completed during 1977.

The project is intended to modify the economy of southeastern France by providing direct water communications between the Mediterranean and North Seas with linkage to the German Rhine-Elbe-Donan waterway network. The canal is also intended to spur development of French heavy industries, including metallurgy and chemicals. While the project has not yet reached the stage where it provides specific potential for American exporters, the U.S. Consulate General in Lyon expects to follow developments and report on trade opportunities that may arise.

The following trade opportunities are based on reports received from the U.S. Foreign Service—Department of State by the Trade Opportunities Division, Room 2323, U.S. Department of Commerce, Washington, D.C. 20230. The commodities in which foreign firms have interest are indicated by the five-digit numbers and commodity classifications which are from the Standard Industrial Classification (SIC) Manual and the Numerical List of Manufactured Products, 1972 Census of Manufactures.

U.S. firms should be aware that the listing in Commerce America *of opportunities to trade in specific commodities and technical data does not necessarily imply approval of their export by the Department of Commerce pursuant to the Department's Export Administration Regulations. Applicable export licensing regulations must be followed.*

Every effort is made to include only traders with good reputations. However, the Department cannot be responsible for any trade relations.

WTDR indicates that a World Traders Data Report on this specific firm is available at $15 from the Export Information Division, Room 1313, U.S. Department of Commerce, Washington, D.C. 20230. A WTDR is a trade profile which contains commercial information including financial references, on an individual foreign firm. Orders must include complete name and address of the subject firm and be accompanied by payment. Further information concerning WTDRs and request forms are available at each Commerce District Office.

The mark (●) indicates that this trade opportunity is a request for bids by a foreign government agency.

Direct Sales

Wood products

● **24910—CYPRUS**—Electricity Authority is inviting bids for 6,400 creosoted wood poles of various sizes. Applicants should reply to S. G. Anastassiades, Chief Engineer and General Manager, Electricity Authority of Cyprus, P.O. Box 4506, Nicosia. Tender documents may be obtained from above address. Copies of tender invitation and brief description of contract work may be obtained from U.S. Department of Commerce, Construction & Forest Products Division, Room 2120, Washington, D.C. 20230; 202-377-3354. Bid deadline Dec. 15.

Public building, related furniture

● **25300, 35700, 36600—HAITI** — Ministry of National Education invites foreign contractors to submit applications to prequalify for bids to supply following equipment and supplies for National Office for Community Development and Elimination of Illiteracy (ONAAC): audiovisual equipment; office and printing equipment; serigraphy and drawing equipment; school furniture; vehicles with audio-visual equipment including sound trucks and office supplies. Project will be financed within framework of Credit Agreement 618 HA between government and IDA. Bid documents available for $10 from Project Office, Ministere de L'Education Nationale, Cite de l'Exposition, Port au Prince, prior to submitting offers. Bid deadline Jan. 14. Refer to Education Project No. 1.

● **25300, 35700, 36300, 36600 — ECUADOR**—Ministry of Agriculture and Livestock announced they will soon issue invitation for bids for furniture, refrigerators, typewriters, calculating machines, and audio-visual machines and supplies. This is in conjunction with a nationwide campaign against foot and mouth disease. Financing of program, including above supplies, will be provided by Inter-American Development Bank. Further information will be supplied to any interested firm or individual by the Programa Nacional de la Fiebre Aftosa, Calle Guayaquil 1740, Quito. Invitations to bid will be published in national newspapers. U.S. firms must have Ecuadorian agent, citizen, or legally established resident, to participate in government bids. If you do not have a representative, contact nearest U.S. Dept. of Commerce District Office.

Drugs

28310, 28330—AUSTRALIA — Commonwealth Serum Laboratories requests offers from U.S. firms relative to direct use, distribution, and licensing arrangements concerning medical diagnostic agents and tissue culture media. Write C/O American Consulate (Melbourne), U.S. Department of State, Washington, D.C. 20521.

Gum, wood chemicals

28340, 28440, 28600 — UNITED KINGDOM—Well-known manufacturer and distributor of toiletries, semi-ethicals, and industrial chemicals, with 1,500 employees and sales force of 100, wishes reciprocal trade and manufacturing opportunities with U.S. firms. Products to be considered must have potential for wide distribution and good sales growth. Contact H. T. Langdon, Secretary, Cussons Group Ltd., Kensal Vale, Manchester M7 0GL.

Steel mill products

● **33100—INDIA**—Soft iron strips of sizes 110 mm x 175 mm and 145 mm x 4 mm in straight lengths of 2,000 mm and soft iron bar 16 mm tolerance of size 1.71 mm in straight length of 2,000 mm. Tender No. CON/ENQ/128; bid deadline Dec. 22. Directorate General of Supplies & Disposals, Parliament St., New Delhi 110 001. Tender documents available from India Supply Mission, 2536 Mass. Ave., NW., Washington, D.C. 20008, at $3.35.

● **33100—PHILIPPINES**—1,900 pieces of V-type steel sheet piles and corner steel piles ranging from 10 to 16 feet long. Bid deadline Jan. 4. National Irrigation Administration, Special Projects Office, 6th floor, NIA Bldg., National Government Center, Epifanio de Los Santos Avenue Diliman, Quezon City. Cable: Niaphil, Manila. Tender documents available from above address at $10 per set.

● **33100—MALAYSIA**—25,000-45,000 tons of 80 lb. flat bottom, medium manganese steel rails. Bid deadline Jan. 19. Malayan Railway, Sentul, Kuala Lumpur 13-09. Tender documents available from above address at M$100 (US$1 equals M$2.50).

● **33100—NICARAGUA** — Supply and installation of 3,500 ft. steel pipeline, 18 in. diameter; also valves, accessories. Bid deadline extended to Jan. 4. Empresa Nacional de Luz y Fuerza, Apartado Postal 55, Managua. Tender documents available from above address or from Kuljian Corp., 3624 Science Center, Phil., Pa., for $100.

Rolling & drawing of nonferrous metals

● **33500—ZAIRE** — About 70 kilometers of medium tension cables for transmission of energy, insulated by non-conducting solid extrusion. Bid deadline Dec. 15. Gecamines, BP450, Lubumbashi. Tender documents available from above address.

● **33500—THAILAND**—12,000 meters of 600 volt control cable, polyethylene type; 5,000 meters of 600 volt control cable, No. 4/0 AWG; 4,000 meters of 600 volt copper cable, No. 500 MCM; 4,000 meters of 600 volt copper cable, No. 750 MCM. Tender No. ADB-MEA-302; bid deadline Jan. 18. Metropolitan Electricity Authority, 121 Chakpetch St., Bangkok 2. Tender documents available from above address at $5 per set.

Nonferrous foundries

● **33610 — COSTA RICA** — Juan Alfredo Gudino, Jefe, Departamento de Aprivisionamiento, Caja Costarricense de Seguro Social—CCSS, Apartado 10038, San Jose, has issued invitation to potential suppliers of hospital equipment, such as furniture, kitchen utensils, X-ray equipment and films, and medical, surgical, ophthalmic, pharmaceutical and research instruments and apparatus, to apply for listing in organization's register of suppliers. Private bids are solicited directly from firms registered with Institute. U.S. firms which would like to be registered should communicate with Gudino, giving complete company name, address, telephone number and information on product lines.

Farm machinery

352358X—TURKEY—Tomato harvesting machinery & attachments. Planning to import & sell tomato harvesting machinery capable harvesting 400-500 tons tomatos/day. Average yield in Bursa area where machines will be used approx. 70 MT/hectare. Firm initially intending import 1-4 machines ASAP this year. Further purchases may follow if machines satisfactory for use in area. Requests detailed tech. specs both c.i.f. & f.o.b. ASAP. Requests prices to port of Izmir. Reply to Ismail Ekinci, Ataturk Caddesi No. 386/1, Izmir. Tel—142030; cable Ticaret Odasi, Izmir.

Special industrial machinery

3559585—MEXICO—Machinery for manufacture of mattresses & box springs, incl. machine to garnett cotton, to install springs and assemble mattresses & box springs, to sew closed & apply trimming to bedding produced. Reply to Arnulfo Garza, Industrias Principe Kroehler, S.A., Apartado 3967, Sucursal "K", Monterrey, N.L. Tel. 51-41-82.

General industrial machinery

● **35600—AFGHANISTAN** — Supply, delivery and supervision of installation of pumping equipment. Equipment will include 5 vertical-shaft, single or double-stage pumps with discharge quantity of 3.80 cubic meters per second with four pumps running. Pumping equipment required to pump fresh water from irrigation canal to higher elevation. Power distribution and other electrical equipment needed to make pump station operational. Contract No. G-C-2; bid deadline Jan. 31, at President, Garwargan-Chardarrah Project Department, Water and Power Authority, Block 13, Microyan, Kabul. Project financed by loan from Asian Development Bank. American Embassy in Kabul has one copy of tender specifications. Water and power authority at above address has limited number of additional copies of specifications for distribution. Project consultant is Crippen International, 1605 Hamilton Ave., North Vancouver, B.C., Canada.

● **35600—BURMA**—Supply of 100 centrifugal pumps with capacity for 200 GPM through 4" outlet. Supply of 20 sludge pumps. Tender No. IRR/IDA/ (3) 76-77; bid deadline Jan. 17. Deputy Director (Stores), Irrigation Department, 8½ Mile Prome Road, Rangoon. American Embassy in Rangoon will forward copies of bid documents and specifications to interested U.S. firms on request, citing "T-0008," as well as enclosing check for $8 per set.

Communications equipment

● **36610—ETHIOPIA**—Reyene Desta, Gen. Mng., Telecommunications Service of Ethiopia, P.O. Box 1047, Addis Ababa, has issued tender No. 24/76 for supply of private automatic branch subscriber telephone equipment. Bid deadline Dec. 23. Copy of specifications available from above address.

● **36610—INDIA**—General Manager and Chief Engineer (Transmission), Bihar State Electricity Board, Vidyut Bhawan, Patna 800001, Bihar, has issued tender No. IDA/BSEB/6 for supply of power line carrier and tele-protection devices. Bid deadline Dec. 13. Copy of specifications available from above address for RS100 (US$11.30).

● **36610—IRELAND** — Engineer-in-Chief, Department of Posts and Telegraphs, Contracts Section, Marlbourough St., Dublin 1, has issued tender No. C/610/1/3; Spec. 5ML/76 for supply, installation, testing and commissioning of 30-circuit pulse code modulation system. Bid deadline Jan. 3. Copy of specifications available from above address.

● **36620—MALAYSIA** — Director-General of Telecommunications Department, Kumpulan Radio Pemancaran, Telecoms Headquarters Bldg., Jalan Bukit Mahkamah, Kuala Lumpur 05-01, has issued tender No. KPT(RP)300/4 for supply of VHF and UHF multi-channel radio link equipment, a total of eight 120-channel systems, 13 60-channel systems, and 42 24-channel systems. These quantities may be increased or decreased. Bid deadline Dec. 14. Copy of specifications available to local representatives of U.S. firms at address above for M$50 (US$1=approx. M$2.50).

● **36610—NEW ZEALAND**—Supply Division, Post Office Headquarters, Wellington 1, has issued tender for supply of telephone instruments. Bid deadline Feb. 18. Estimated value of this procurement US$5 million per year for five years. Copy of specifications available from P. F. Solnik, at above address. Ask for Prospect Information Report 08/76.

Electrical machinery, equipment, supplies

● **36930 — THAILAND** — Lt. Col. Natte Krapan, Chief of Security Staffs, Department of Civil Aviation, Royal Thai Air Force, Don Muang Airport, Bangkok, has received budgetary approval to procure two baggage X-ray systems and eight hand scanners for use on baggage and passengers. Invitation for tenders will be issued later this year. U.S. firms wishing to bid should request details from Col. Krapan, address above, preferably through local agent.

Engineering, laboratory, scientific, research instruments

● **38100, 38400 — PARAGUAY** — Dr. Luis A. Vely, Dir., Ministerio de Educacion & Culto, Calle Piribebuy 270, Segundo Piso, Ascuncion, has issued tender No. 3 for supply of miscellaneous equipment for teaching physics, chemistry, science, dentistry, etc. Bid deadline Dec. 14. Approximate cost of entire procurement is US $65,000. Copy of specifications available from above address at cost of Guaranies 10,000.

● **38110—YUGOSLAVIA**—Prof. Suleiman Spahovic, Pedagoska Akademija, Merije Gupca 18, Mostar, has issued tender for supply of one helium-cadmium laser with accessories for use as teaching aid and for scientific research in physics-optical science laboratory. Laser should operate at wavelength of approximately 440 nanometers (blue) with power output of around 20 milliwatts. Accessories should include lenses, mirrors, prisms and table with magnetic holders. Offers should be submitted to Prof. Spahovic as soon as possible, since academy must spend its allotment of $10,000 before beginning of new fiscal year in January.

Measuring & controlling devices

382XXXX—INDIA—Explosion meter to detect explosive condition inside power station high-pressure boiler furnace. Working temperature from 1200 to 1600 degree centigrade should be suitable for both pressurized & balanced draught furnaces; velometer to measure air velocity. To be installed at power generating stations; thermionic valve voltmeter; 0-30 kv; portable clip-on-type ammeter: 0-600 millamps; portable voltmeter to measure active & reactive power of 100 x 200 mw generators; double kelvin bridge; electronic gas leakage detector (at power generating stations); detector for vacuum tightness; portable continuous hydrogen concentration monitor; dynamometer for use with 120 x 200 mw turbines—very heavy duty; stick micrometers; optical level with height gauge; 2-color optical pyrometer; special temperature indicator at high voltage points; voltage surge counter (portable); relay testing kit; ductors ohm meter; smoke testing apparatus; fuel analyzer; psychrometer; ratiometer; hydrogen purity indicator; magnetic polarity checker; flash testing equip.; interturn short detector; polarity tester; continuity torch tester; slip measuring instrument, event recorder; fireproof recorder; discharge detector; optical instrument for alignment; bond meter (portable). Firm making inquiry on behalf of govt. undertaking which mfrs. power generating equip. Reply ASAP to—T. V. Krishnamurthy, Mechtech, 22 Deivasigamani Mudaly Rd., Madras 600014. Tel 87557.

● **38230—SINGAPORE**—Chou Tai Choong, Chief Water Engineer, Public Utilities Board, Water Department, 5th Floor, Colombo Court Bldg., Singapore 6, has issued tender No. WE 652314/75 for supply of flow measuring instruments and flanged control valves. Bid deadline Dec. 14. Copy of specifications available from Finance Department, Public Utilities Board, 1st Floor, City Hall, Singapore 6, for S$500 (US$205), refundable if tender forms are returned on or before closing date.

● **38240—SINGAPORE**—Chou Tai Choong, Chief Water Engineer, Public Utilities Board, Water Department, 5th Floor, Colombo Court Bldg., Singapore 6, has issued tender No. WE 652237/1/75 for supply of 108,000 water meters, 15 mm, required by Water Department for three-year period 1977-1979. Samples for testing should be sent to Water Board before Dec. 23. Only firms whose meters are found to comply with requirements will be permitted to bid.

Surgical, medical, dental instruments

● **38420—SRI LANKA**—Chairman, Tender Board, Department of Health, P.O. Box 584, Colombo, has issued tender No. COM/TEN/76/271 for supply of elastic bandages, zinc oxide self-adhesive plaster, and extension plaster. Bid deadline Dec. 14. Copy of specifications available from Embassy of Sri Lanka, 2148 Wyoming Ave., NW, Washington, D.C. 20008.

Pens, pencils, office, artists' materials

● **39590—SRI LANKA**—Raw materials for manufacture of dry-cell batteries (a) 39,742,000 pieces of carbon rods (electrodes) in three sizes, (b) 140 metric tons acetylene black conforming to three different specifications, (c) 492 KGS mercuric chloride, (d) two types of ammonium chloride (non-caking and standard quality) totaling 385 metric tons, (e) 4 metric tons of zinc oxide and (f) 3 metric tons of rosin wax. Reply to S. Aludeniya, Gen. Mgr., Ilanka State Trading Corp., P.O. Box 1686, 119 Wekande Road, Colombo 2. Tender 1/76/21. Tenderers should quote f.o.b. and c. & f. Colombo prices separately; preference to those who quote same rates. Payment by irrevocable letter of credit. Indicate deferred payment terms available. State packing and delivery of each item. Forward tenders in duplicate to S. Aludeniya. Estimated purchase value is $463,140.

Used merchandise

5931XXX—SWEDEN—Roller skates, second hand; also interested in franchising of roller skating rink operation with complete equip. Small co., estab. 1975. Has share capital of Skr. 50,000. Represents number of foreign firms & sells in Sweden (60 percent), Denmark (10 percent), Norway (10 percent) & other countries. According to local credit sources, co. is financially sound & has met payments promptly. Reply to Willy Eder, Mng. Dir., Intershipments AB, Box 7053, S-161 07 Bromma. Telex: 172 80 Triadan S; tel.: 08/87 09 90.

Representations

Foreign private firms are interested in agency agreements and/or distributorships for these products.

Coal

1211XXX—PAKISTAN—Agency for sale of bituminous coal to produce metallurgical coke for use in steel mills. Annual sales potential 300,000 to 500,000 m.t. Firm is medium-size importer and sale indent agent of coal, iron and steel, fertilizers, pesticides, electric and gas meters. Imports from Japan, Australia and U.K. Wishes to act as agent for coal dealers. Claims very good contacts in public and private sectors. Marketing territory all Pakistan. Annual sales US$1 million. Employs 10. Reply to—Qamar Ahmad, Dir., Iesho Pak Ltd., 44 Farid Chambers, Abdullah Haroon Road, Karachi. Cable "Kapohsei" Karachi; tel 510840 and 514746.

Pottery, related products

3231633, 3229125—AUSTRALIA—Novelty glassware—hand-made & machine-made; ceramic ovenware; Estab. 1946, employs 30, imports from Japan, Korea, Hong Kong, Italy, France & U.K. Trade ref: Polarizers, Inc., 1500 Spring Garden St., Phil., Pa. 19101. Requests prices c&f. Reply to—John M. Petterson, Mng. Dir., Wolkenberg Intl. Pty. Ltd., 374 Nicholson St., Fitzroy, Victoria 3065. Cable Elwol Melbourne; telex AA33705; tel 03-41-5059.

Steel mill products

3315951—THAILAND—Galvanized barbed concertina wire with core of hardened spring steel of high tensile strength covered with barbed tape, size: 955 mm. in dia., extended length 13 to 15 meters. Requires 900 bundles of 55 rounds ea. Ea. bundle to weigh about 15 kgs. U.S. specification: part No. FSN 5660-921-5516. Wishes supply above to Ministry of Defense. Excl. agency. Reply to—Somsak Charoenlap, Mng. Dir., A.I.C.E. Enterprises (Thai) Co., Ltd., 35/9 Chalermlok Trade Center, Rajdamri Road, Bangkok 5. Cable AICE; tel. 2526096, 2517528.

Heating apparatus, plumbing fixtures

3433719—FRANCE—All types of parts & devices for industrial gas burners. Reply to—Philippe Balland, Societe Balland-Brugneaux 16, Blvd De La Republique, 71107 Chalon Sur Saone; Phone 481603; Telex 800547; Cable Balland Chaln.

Fabricated metal products

34940XX—NETHERLANDS — Advanced components for pipeline systems in process industries. Reply to—H. Jes, Mgr., Vedriex BV Technical Trading Co., Nieuwe S-Gravelandseweg 33, P.O. Box 478, Bussum. Telex 43782, Tel. 02159/16447.

General industrial machinery

3569126—UNITED KINGDOM—Agents & distr. for label presses, drying tunnels for printed webs, paper slitters, & ancillary equip. for label-making. Employs 15 incl. 2 salesmen. Interests are any type of label-making equip. Reply to—P. Botterman, Dir., Edale Investments Ltd., 3 Fletcher St., Ashton-Under-Lyne OL6 6BY. Tel: 061-330-4419.

Office, computing, accounting machines

3573261—SWEDEN—Line and dot printers for process control industries. Co. intends to buy about 50 printers/year. Share capital is Skr. 50,000. Employs 30. Head office located in Malmo with branch office in Vasteras. According to local credit sources, co. is well-estab. & has met business obligations satisfactorily. Reply to—Peter Brakl, Instrumentfirman Inor AB, Emilstorpsgatan 32, S-213 64 Malmo. Telex: 32452 Inorab S; tel: 040/222500.

Antique, secondhand stores

5931XXX—AUSTRALIA—Used V-8 engines, used automatic & 4-speed transmissions. Chevrolet & Ford products or equal. Annual sales potential $130,000. Co. is small partnership. Reply to—J. R. Tauschke, Partner, Super Plus, 55 Bennet St., Dandenong, Vic. 3175. Tel.: 03/791/7139.

Visiting Buyers & Officials

PAKISTAN—G. N. Siddiqui of Karachi is interested in hearing from U.S. manufacturers of **wall decorations and sanitary fittings.** He wants to become agent for such products. He may be contacted through Theresa E. Rettig, Foreign Buyer Program, U.S. Department of Commerce, Room 2322, Washington, D.C. 20230; 202-377-3265.

JAPAN—Japanese owners and officials of K Mart chain stores will visit California in January to study **U.S. convenience store operations,** and to seek **household necessities of both food and non-food items,** salable in Japan. Buyers also seek **store fixtures.** They would like to visit urban and suburban convenience stores and combination stores, both franchise and non-franchise, with emphasis on non-franchise; talk with store owners or managers briefly to exchange views on merchandising; buy samples of American products salable in Japan; and invite lecturers to dinners or briefings scheduled in Los Angeles and San Francisco. Group has budget to pay fee to lecturers. K Mart was established in Japan in 1964 by Kittaka and Co. Ltd., as voluntary chain of grocery stores. Has over 500 non-franchise stores owned by individual companies, and sales exceed U.S. $200 million. American firms interested in contacting these Japanese buyers contact Bill Corfitzen, Room 2322, U.S. Department of Commerce, Washington, D.C. 20230; 202-377-2068.

SWEDEN—Erik Kjellner of Stockholm wants to find U.S. suppliers of **diluting agents, thickening agents, preservatives and other chemicals used for manufacture of latex.** He will be in the U.S. for 9 days beginning Dec. 2. He also plans to attend National Plastics Expo in Chicago. Theresa E. Rettig, 202-377-3265.

FRANCE—Robert Halgand and Jacques Masson are interested in becoming French distributors for **inexpensive consumer goods such as soft drinks, dietetic products such as sugar-free items and salt substitutes, wearing apparel such as jeans, t-shirts, sweatshirts and sportswear, and bourbon.** Theresa E. Rettig, 202-377-3265.

URUGUAY—Roberto Lannes, Montevideo, wants to hear from U.S. manufacturers of **machinery to make polyethelyne packing materials.** His primary interest is sheets of air-filled sacs of polyethelyne used to prevent crushing of various items. For further information contact Theresa E. Rettig, 202-377-3265.

TAIWAN—David W. Lee, Taipei, is interested in hearing from U.S. manufacturers of **bridge-building materials, epoxy for the paper industry, new-to-market products, and sharks fins.** Theresa E. Rettig, 202-377-3265.

NIGERIA—Olusola Olaniyan, a registered pharmacist, will be returning to Nigeria at the end of 1977 and is interested in becoming an **agent for U.S. pharmaceutical firms.** He may be contacted at 906 Gallatin St., NW., Apt. #203, Washington, D.C. 20011, phone 202-722-1929. Theresa E. Rettig, 202-377-3265.

TAIWAN—Hsi-Ching Chen of Taipei is interested in purchasing **machinery to manufacture polystyrene cups and blow-molding machinery to make narrow-neck bottles and paper for making milk containers.** Theresa E. Rettig, 202-377-3265.

Costa Rica Updates Register For Suppliers To Institute

The Costa Rican Social Security Institute, an autonomous agency of the government, is updating its register of firms from which the Institute makes direct purchases and purchases by private bids. Public bids are published in the Official Gazette, private bids are solicited directly from companies registered with the Institute. Among the items bought are laboratory chemicals, inorganic bulk compounded chemicals, hospital utensils including kitchen utensils, x-ray plates, photographic material and equipment, and medical, surgical, pharmaceutical and research instruments and apparatus. U.S. firms wishing to register should send their complete name, address, telephone number and product line to Juan Alfredo Gudino, Jefe, Departamento de Aprovisionamiento, Caja Costarricense De Social-CCSS, Aptdo. 10038, San Jose, Costa Rica. P-76886.

Joint Construction Ventures Can Ease Entry Into Nigeria

American firms face an uphill fight in participating in the Nigerian construction sector. Arriving on the scene after European firms are already solidly entrenched, they often discover that both Nigerian State and Federal officials prefer to deal with someone they know, understandably with companies which have proven themselves in Nigeria. A possible way to gain better entry might be through joint ventures with companies already in Nigeria which have foreign participation. These firms and the Americans could bring complementary advantages to a combined operation which would benefit all concerned. Firms interested in joint venturing with foreign constructors in Nigeria notify Janice Philbrick, Major Projects Div., Rm. 3056, U.S. Department of Commerce, Washington, D.C. 20230. Names will be forwarded to the U.S. Embassy in Lagos.

Future Construction Abroad

MEXICO—Consortium of Mexican entrepreneurs plans to construct **tourism complex** in Acapulco, consisting of horse-racing track, dog-racing track and cock-fighting theater. Project will cost an estimated U.S.$176 million and will be a large version of existing example this type installation in Aguascalientes, Mexico. Consortium will be able to construct, but needs assistance with technical aspects of construction and, thereafter, administrative skills and operating methods. Proposed relationship of U.S. firm would be equivalent of, e.g., Hilton Co. to foreign-owned hotels. Consortium requests specifically collaboration with prestigious company. U.S. firms acquire up to 49 percent equity if desired. Contact American Embassy, Cor. Danubio and Paseo de la Reforma, 305 Colonia Cuauhtemoc, Mexico D.F.

INDONESIA — International civil engineering contractors and subcontractors of prefabricated buildings are invited to submit prequalification material to aid on the construction of **Port of Tanjung Priok.** Information and documentary evidence of firm's organization, financial stability, completed projects of similar nature, machinery and equipment inventory, and curriculum vitae of key personnel to be assigned to project must reach Port of Tanjung Priok, Jalan Pelabuhan Raya 9, Tanjung Priok, Jakarta Utara, with copy to Port of Tanjung Priok, c/o Swan Wooster Engineering Co., Ltd., 1525 Robson St., Vancouver, B.C., V6G 1C5, Canada (telex no. 0451275) by Dec. 20. Partially financed by $32 million World Bank loan, the work includes general cargo facilities (demolition, new buildings, storage yards), regional harbor facilities (dredging, wharves, roads), pre-engineered steel transit sheds (approx. 34,000 square meters), and land side access (overpass, roads, related services). OPIC.

NIGERIA—Ibadan firm of Tropic Design Partnerships has been commissioned by Nigeria's new federal Capital Development Authority (CDA) to prepare concept design and cost estimate for **field camp** near Abuja, intended to house 7,000 within 6 years. Approximate value of project is $50 million. Initial terms of reference could be expanded to require substantial infrastructure facilities, including small airport. Construction firms interested in participating send qualifications and brochures to Olanrewaju Olateji, Tropic Design Partnerships, 11 Ilaro St., Bodija, P.O. Box 1864, Ibadan. To avoid delays and assure receipt, material may be sent directly to American Consul, Barclay's Bank Bldg., P.M.B. 5221, Ibadan, for transmittal to Olateji.

The Overseas Private Investment Corp. (OPIC) offers political risk insurance on assets and bank guaranties to U.S. construction and service firms planning to submit bids on projects in certain developing countries, identified by the "OPIC" notation at the end of some items. For further information on OPIC's contract insurance programs, write Construction Insurance Officer, Overseas Private Investment Corp., Washington, D.C. 20527. Tel: 202-632-7825.

HONG KONG—Marine Department planning to invite tenders from consulates for detailed studies of Crown Colony's **harbor surveillance system.** Some combination of radar, day and night remote-controlled television and VHF radio location equipment will replace VHF radio system and visual contact currently used to monitor ship movements. With target date for completion of 1980, installation expected to begin in 1978. System is budgeted at approximately $4 million plus cost of feasibility study.

THAILAND—Fish Marketing Organization (FMO) and Cold Storage Organization (CSO), both state enterprises, have borrowed a total of $20 million from Asian Development Bank and approx. same amount from local banks. FMO, which will grant a total of almost $25 million in loans to poor fishermen to purchase **boats and equipment,** is collecting information from these fishermen as to what types of engines and other marine equipment they are interested in purchasing. When this information is tabulated, FMO will begin buying via international tenders on behalf of fishermen. CSO has been allocated approx. $16 million to purchase **five cold storage installations and 32 cold storage trucks.** ADB is expected to approve bidding specifications by end of this year and then CSO will issue international tenders for equipment. Further details may be obtained from Sant Bundhukul, Dir., Fish Marketing Organization, Yanawa, New Rd., Bangkok, or from Sanan Ruamluks, Dir., Government Cold Storage Organization, Yanawa, New Rd., Bangkok. OPIC.

TURKEY — Istanbul Urban Expansion Project, $2.3 million of which World Bank agreed in June 1972 to finance, is being implemented in two stages. First covered economic and social planning studies to determine development strategy for Istanbul through 1995 and is completed. Funds remaining (less than $1 million) will be spent for implementation of second stage, which involves **feasibility studies for infrastructure projects** in Mahmut Bey area in Westside Istanbul, which has been selected as pilot project area, representative of other areas needing immediate planning. After Bank approval of tender specifications prepared by Ministry of Reconstruction, international tenders will be called for feasibility studies. Foreign consulting companies will be required to form consortia with Turkish firms in order to bid. Further information may be obtained from Imar ve Iskan Bakanligi, Metropoliten Planlama ve Imar Genel Mudurlugu, Ankara, or from Istanbul Nazim Plan Burosu, Odakule, Beyoglu, Istanbul. OPIC.

SUBSCRIPTION ORDER FORM

ENTER MY SUBSCRIPTION TO **Commerce America**
at $29.80. Add $7.45 for foreign mailing. No additional postage is required for mailing within the United States and its possessions.

☐ Remittance Enclosed (Make checks payable to Superintendent of Documents)

☐ Charge to my Deposit Account No.

Send Subscription to:

NAME – FIRST, LAST

COMPANY NAME OR ADDITIONAL ADDRESS LINE

STREET ADDRESS

CITY | STATE | ZIP CODE

PLEASE PRINT

MAIL ORDER FORM TO:
Superintendent of Documents
Government Printing Office
Washington, D.C. 20402

☆ U.S. Government Printing Office: 1976, 240-851/3

Commerce Building 14th Street and Constitution Ave., NW., Washington, D.C. 20230, (202) 377-2000

U.S. DEPARTMENT OF COMMERCE

ELLIOT L. RICHARDSON, Secretary of Commerce **EDWARD O. VETTER,** Under Secretary of Commerce

Secretarial Officers

Leonard S. Matthews, Asst. Secretary for Domestic and International Business

Robert J. Blackwell, Asst. Secretary for Maritime Affairs (Maritime Administration)

John W. Kendrick, Chief Economist

Richard G. Darman, Asst. Secretary for Policy

Joseph E. Kasputys, Asst. Secretary for Administration

Creighton Holden, Asst. Secretary for Tourism (U.S. Travel Service)

John T. Smith, II, General Counsel

Betsy Ancker-Johnson, Asst. Secretary for Science and Technology

John W. Eden, Asst. Secretary for Economic Development

Heads of Operating Units

Robert M. White, National Oceanic and Atmospheric Administration

Robert L. Hagan, Acting, Bureau of the Census

John M. Richardson, Office of Telecommunications

Howard D. Tipton, National Fire Prevention and Control Administration

George Jaszi, Bureau of Economic Analysis

Robert E. Shepherd, Office of Energy Policy and Programs

John P. Kearney, Office of the Ombudsman

William T. Knox, National Technical Information Service

C. Marshall Dann, Patent and Trademark Office

Ernest Ambler, Acting, National Bureau of Standards

Alex M. Armendaris, Minority Business Enterprise

Regional Secretarial Representatives

Michael A. McManus, Jr., New York City

Charles Day, Philadelphia

Richard L. Heffner, Atlanta

Daniel A. Cronin, Jr., Boston

Robert J. Hitt, San Francisco

Dr. Gayle P. W. Jackson, Kansas City

Edward L. Coker, Dallas

John R. Bermingham, Denver

Fred Shanaman, Jr., Seattle

James P. Stirling, Chicago

District Offices

Albuquerque, N.M., 87102, 505 Marquette NW, Suite 1015 (505) 766-2386.

Anchorage, 99501, 632 Sixth Ave., Hill Bldg., Suite 412 (907) 265-5307.

Atlanta, 30309, Suite 600, 1365 Peachtree St., N.E. (404) 526-6000.

Baltimore, 21202, 415 U.S. Customhouse, Gay and Lombard Sts. (301) 962-3560.

Birmingham, Ala., 35205, Suite 200-201. 908 S. 20th St. (205) 254-1331.

Boston, 02116, 10th Floor, 441 Stuart St. (617) 223-2312.

Buffalo, N.Y., 14202, Room 1312, Federal Bldg., 111 W. Huron St. (716) 842-3208.

Charleston, W.Va., 25301, 3000 New Federal Office Bldg., 500 Quarrier St. (304) 343-6181, Ext. 375.

Cheyenne, Wyo., 82001, 6022 O'Mahoney Federal Center, 2120 Capitol Ave. (307) 778-2220, Ext. 2151.

Chicago, 60603, Room 1406, Mid-Continental Plaza Bldg., 55 E. Monroe St. (312) 353-4450.

Cincinnati, 45202, 10504 Federal Office Bldg., 550 Main St. (513) 684-2944.

Cleveland, 44114, Room 600, 666 Euclid Ave. (216) 522-4750.

Columbia, S.C., 29204, Forest Center, 2611 Forest Dr. (803) 765-5345.

Dallas, 75242, Room 7A5, 1100 Commerce St. (214) 749-1515.

Denver, 80202, Room 165, New Custom House, 19th and Stout Sts. (303) 837-3246.

Des Moines, Iowa, 50309, 609 Federal Bldg., 210 Walnut St. (515) 284-4222.

Detroit, 48226, 445 Federal Bldg., 231 W. Lafayette (313) 226-3650.

Greensboro, N.C. 27402, 203 Federal Bldg., W. Market St., P.O. Box 1950. (919) 378-5345.

Hartford, Conn., 06103, Room 610-B, Federal Office Bldg., 450 Main St. (203) 244-3530.

Honolulu, 96813, 286 Alexander Young Bldg., 1015 Bishop St. (808) 546-8694.

Houston, 77002, 2625 Federal Bldg., Courthouse 515 Rusk St. (713) 226-4231.

Indianapolis, 46204, 357 U.S. Courthouse & Federal Office Bldg., 46 E. Ohio St. (317) 269-6214.

Los Angeles, 90049, Room 800, 11777 San Vicente Blvd. (213)824-7591

Memphis, 38103, Room 710, 147 Jefferson Ave. (901) 521-3213.

Miami, 33130, Rm. 821, City National Bank Bldg., 25 W. Flagler St. (305) 350-5267.

Milwaukee, 53202, 605 Federal Office Bldg., 517 E. Wisconsin Ave. (414) 224-3473.

Minneapolis, 55401, 218 Federal Bldg., 110 S. Fourth St. (612) 725-2133.

New Orleans, 70130, Room 432, International Trade Mart, 2 Canal St. (504) 589-6546.

New York, 10007, 37th Floor, Federal Office Bldg., 26 Federal Plaza, Foley Sq. (212) 264-0634.

Newark, N.J., 07102, Gateway Bldg. (4th floor) Market St. & Penn Plaza (201) 645-6214.

Omaha, Neb., 68102, 1815 Capitol Ave., Suite 703A (402) 221-3665.

Philadelphia, 19106, 9448 Federal Bldg., 600 Arch St. (215) 597-2850.

Phoenix, Ariz., 85004, 508 Greater Arizona Savings Bldg., 112 N. Central Ave. (602) 261-3285.

Pittsburgh, 15222, 2002 Federal Bldg., 1000 Liberty Ave. (412) 644-2850.

Portland, Ore., 97204, Room 618, 1220 S.W. Third Ave. (503) 221-3001.

Reno, Nev., 89502, 2028 Federal Bldg. 300 Booth St. (702) 784-5203.

Richmond, Va., 23240, 8010 Federal Bldg., 400 N. 8th St. (804) 782-2246.

St. Louis, 63105, 120 S. Central Ave. (314) 425-3302.

Salt Lake City, 84138, 1203 Federal Bldg., 125 S. State St. (801) 524-5116.

San Francisco, 94102, Federal Bldg., Box 36013, 450 Golden Gate Ave., (415) 556-5860.

San Juan, P.R., 00918, Room 659, Federal Bldg., Chardon Ave. (809) 763-6363, Ext. 555

Savannah, 31402, 235 U.S. Courthouse and Post Office Bldg., 125-29 Bull St. (912) 232-4321, Ext. 204.

Seattle, 98109, 706 Lake Union Bldg., 1700 Westlake Ave. North (206) 442-5615.

U.S. GOVERNMENT PRINTING OFFICE
ASSISTANT PUBLIC PRINTER
(SUPERINTENDENT OF DOCUMENTS)
WASHINGTON, D.C. 20402

OFFICIAL BUSINESS

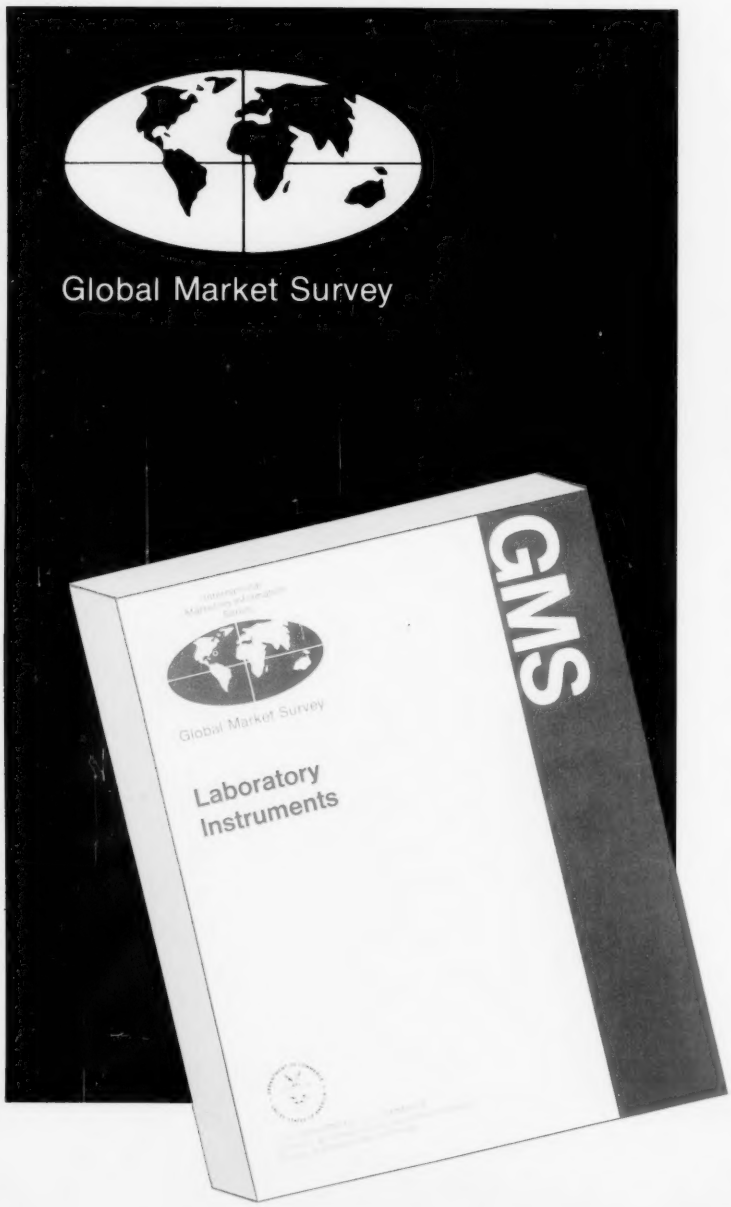
PENALTY FOR PRIVATE USE, $300

POSTAGE AND FEES PAID
U.S. DEPARTMENT OF COMMERCE
201

First-Class Mail

U.S.MAIL

CRTD SERIA300SAISSDUE004R 1
SERIALS DEPT
XEROX UNIV MICROFILM
300 N ZEEB RD
ANN ARBOR MI 48106



OVERSEAS SALES OPPORTUNITIES AVAILABLE FOR

Manufacturers of Laboratory Instruments

A new Global Market Survey—"Laboratory Instruments"—has just been published by the U.S. Department of Commerce as a part of a program designed to help this industry expand its export marketing efforts. The survey shows that laboratory instrument sales in 16 leading countries should exceed $1.8 billion by 1979. The predicted increases will follow on the heels of already vigorous growth experienced in recent years. These markets soared from over $650 million in 1972 to more than $1 billion recently.

Countries covered by the Survey include:

- Australia
- Brazil
- Czechoslovakia
- Germany
- Hong Kong
- Iran
- Israel
- Italy
- Japan
- Mexico
- Netherlands
- Republic of China (Taiwan)
- Spain
- Sweden
- United Kingdom
- Venezuela

The Survey identifies the best sales opportunities for your products in selected markets abroad. Contact the nearest District Office (see inside cover) to obtain your copy.